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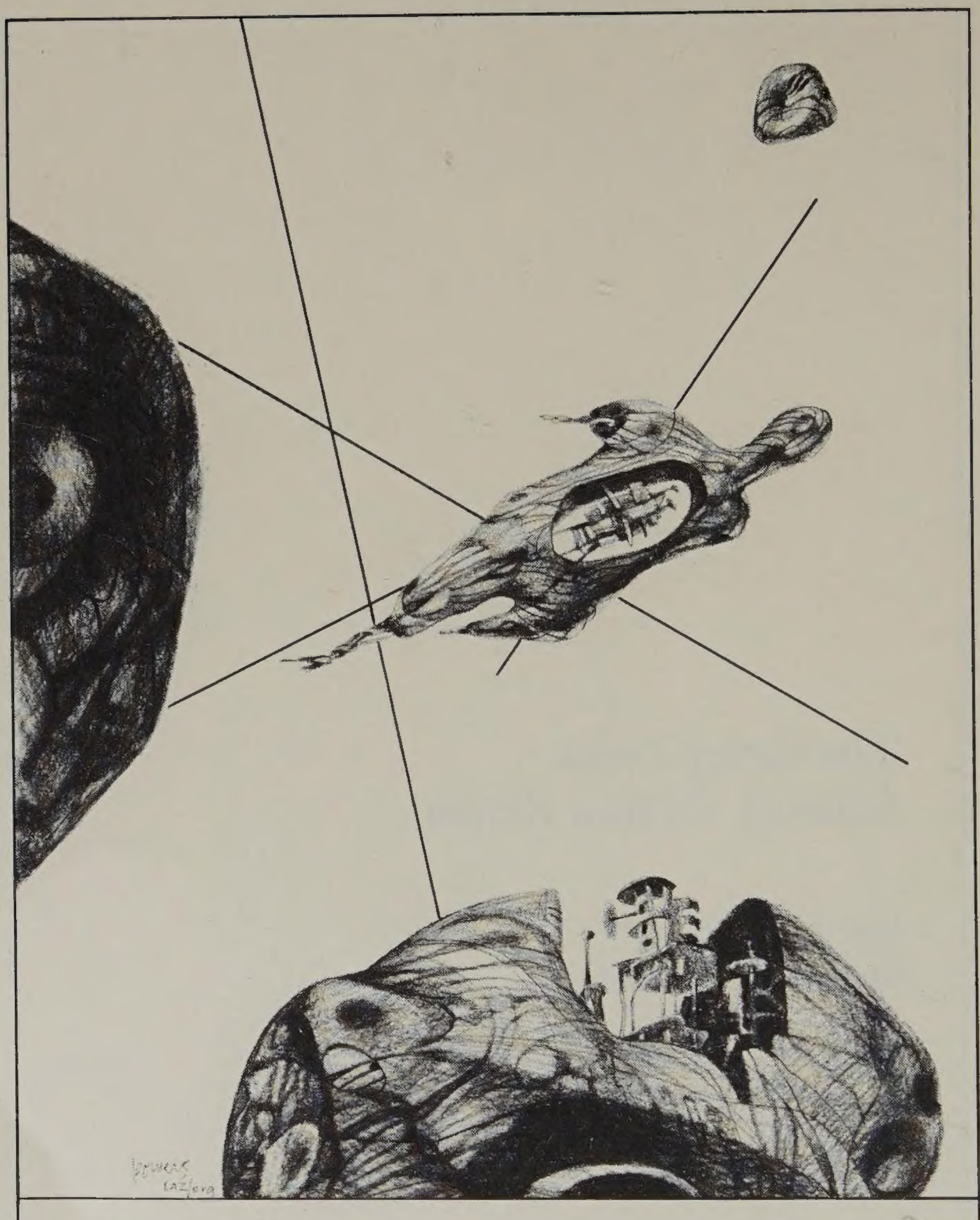
The Gregg Press
Science Fiction Series

Iter Lunare
by David Russen



The Gregg Press Science Fiction Series

David G. Hartwell, L. W. Currey, *Editors*
Richard Gid Powers, *Associate Editor*

Iter Lunare

DAVID RUSSEN

With a New Introduction by
MARY ELIZABETH BOWEN

GREGG PRESS

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This is a complete photographic reprint of a work first published in London by J. Nutt in 1703. Reproduced from an electrostatic copy of an original in the British Museum (call number 1081.d.9).

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Introduction

CYRANO DE BERGERAC's *Voyage dans la Lune* (1657) — satiric, fantastic, anarchic — became known to Englishmen through Thomas St. Serf's 1659 translation, *Selenarchia: Or, the Government of the World in the Moon: A Comical History.* Almost a half century later, David Russen, a schoolteacher of Hythe, in Kent, begged time to read it twice, so much had de Bergerac sparked his interest. *Iter Lunare* (1703) is Russen's excited account of *Selenarchia,* an essay in appreciative criticism and applied science at once.

De Bergerac had begun work on *L'Autre Monde,* as he called his imaginary voyages to the moon and sun, in 1648, and by 1650 its circulation in manuscript had reinforced his reputation as a free-thinker, since his moon-traveller and the societies he visited were the vehicle for a great deal of contemporary satire.[1] Only five years later, ill from the effects of a beam falling upon his head as he entered the house of his patron, de Bergerac died in Paris. The manuscripts of *L'Autre Monde* were lost (or perhaps stolen), but they finally came into the possession of Henry Le Bret, lifelong friend and later biographer of de Bergerac. The first of the three voyages appeared in an authorized edition two years after de Bergerac's death; Le Bret, about to take religious orders, had excised most of the blasphemous or bawdy passages. The *Voyage dans la Lune* was popular, and so Le Bret followed it with the second part of de Bergerac's manuscript, the unfinished *L'Histoire des Etats et Empires du Soleil.* The third part, *L'Etincelle,* remains lost.

St. Serf's translation was based on the Le Bret version of

Voyage dans la Lune, and it was this version, truncated as it was, that so sparked Russen's interest. For David Russen shared one thing with the bohemian adventurer Cyrano de Bergerac: a spirit of modernism. Released from the earth-centered cosmos of the ancients by the Copernican revolution, their age was building a new conceptual universe. Galileo's *The Starry Messenger* (1610) had told of ridges and valleys on the moon; might men live there too? Was the earth just one of millions upon millions of worlds, each as good as the next? And how would man ever get to those worlds? The new spirit was one of daring speculation; it disregarded the old religious and philosophical beliefs that stood in the way of an imaginative grasp of the new science; it played with possibilities.

De Bergerac antedated the 18th-century French "querelle des anciens et modernes," the great battle of words between the defenders of Aristotle and the proponents of the new science, but he was already lacing his voyages with lively attacks against established pieties, particularly ancient science. Arrived on the moon, his hero outrages the priests by telling them that his own earth is *the* world and theirs only a moon of it. They threaten to drown him. He persists: " 'But,' they all said to me, 'you can see earth here, rivers and seas. What could they all be?' 'Never mind!' I retorted. 'Aristotle assures us that it is only the moon, and if you had said the opposite in classes where I did my studies, you would have been hissed!'"[2]

Where de Bergerac was satiric, Russen is serious. Russen's is a different kind of modernism: he wants to tip the balance towards reality, to voyage to the moon not as an imaginative venture, but as a real project for the future.[3] He has no patience with those "moon-blind intellects" who scoff at the challenge of space travel; to him, de Bergerac's moon men and their strange customs are real possibilities. The English milieu had already produced Francis Bacon's *New Atlantis* (1626/7), which described a utopian island where science, not simply a contemplative activity, bettered mens' lives in a very practical way. Russen shared Bacon's spirit, and since *Iter Lunare* went through two editions, we may assume his audience did also.

In responding to de Bergerac so soberly, Russen became the first to write in a mode of science fiction criticism that persists to this day: finding practical solutions to imaginary problems.[4] The

columns of science fiction magazines fairly crackle with energy and technological know-how directed at hypotheticals. Russen, likewise, has a real solution to the problem of getting to the moon; he sets fantasy aside, steps from a world of imaginary voyages into a real one, and takes up considering the height of the atmosphere, the distance to the moon, the effect of reduced gravity. De Bergerac had imagined a world on the moon; Russen wanted to get there.

And yet while David Russen vanished into respectable obscurity, Cyrano de Bergerac acquired a reputation for impiety and eccentricity that kept his works frequently reprinted. Voltaire dismissed de Bergerac as a madman (meaning truly mad, not quaintly so), and the 18th century ignored him. In the 19th century began a revival of interest in this quixotic, long-nosed figure whose chief passion was duelling in defense of women and other such affairs of honor. Thus the heroic apotheosis of him in Edmund Rostand's *Cyrano de Bergerac* (1897).

David Russen's obscurity seems assured. No clues to his life exist except a misleading reference in the *Dictionary of National Biography* and what little he chooses to reveal about himself in his writing. His only other printed work is one of those innumerable religious tracts of his century, a long discourse against the Anabaptists, *Fundamentals without a Foundation: or, a True Picture of the Anabaptists in their Rise, Progress, and Practice. Written for the Use of Such as Take 'Em for Saints, When they are Not so Much as Christians* (1698). Here he shows a talent for parallel sentences and a touch of impertinent wit: he accuses Benjamin Keach, prolific Anabaptist author and preacher, of "indiscretions" attributable to the "temptations arising from embracing the fair sex in water."[5] Otherwise, Russen is methodical and workmanlike in his systematic attack on the principles of Anabaptism.

And yet *Iter Lunare* must have seemed a piece of daring speculation to its readers, who were ill-prepared to see the schoolteacher of Hythe seriously considering de Bergerac's fantastic voyage. Russen's modernism is sober yet imaginative, practical and realistic; the age had passed when such speculation signaled anti-authoritarianism. Quite seriously, *Iter Lunare* told its readers how they might actually get to the moon and what they might find there when they did.

De Bergerac wrote in a genre that was seeing a revival in the 17th century: the cosmic voyage, precursor of modern science fiction.[6] Ever since the ancients, fascination with outer space had inspired imaginary travels. Lucian's third century voyage was made by mere chance; he had no plan for getting to the moon, and his descriptions of the moon men and their customs were pure fantasy. With Johannes Kepler's *Somnium* (1634) we see the impact of the new science on the cosmic voyage, for here is a mixture of fantasy and realism. Kepler's moon voyager contends with the effects of reduced gravity and of rarefied air and his moon men are not purely utopian or satiric, but an attempt to imagine what conditions on the moon might be like.

More voyages began to appear in French, German, and Italian. Frequently, realism tinged the fantasy. Even Ben Jonson, whose inspiration tended towards the classical, wrote a court masque "News from the New World Discovered in the Moon" (1621). Two more Englishmen — an Anglican divine, Francis Godwin, and a member of the Royal Society of London, John Wilkins — both published in the genre in 1638.

Francis Godwin's *The Man in the Moon* went through many editions, and its moon voyager, Domingo Gonsales, became to the 17th century what Tarzan would be to the 20th — a popular culture hero. Gonsales' means of moon travel was to harness swans, which he thought migrated to the moon in winter. Training forty or fifty of them to rise up in tandem, he voyaged to the moon, where he found an arcadia. "O how did my heart even swell with joy and admiration of mine own invention!" he exclaimed in praise of his flying chariot.[7]

John Wilkins' *Discovery of a New World: or, a Discourse tending to prove, that it is probable there may be another Habitable World in the Moon* (1638) was not fiction, but it fixed many of the conventions of the moon voyage. It established the lunar distance as 179,712 miles, the height of the atmosphere at 20 miles, and the sphere of attraction of the earth's gravity at a similar distance. As Russen would later, Wilkins interested himself in the practical matters of space travel; unlike Russen, he thought Domingo Gonsales' swans would prove feasible, and said so in commenting upon Godwin in the 1640 edition of *Discovery*.

Russen claims he did not read Wilkins' *Discovery*. But he probably read another of Wilkins' works, *Mathematicall Magick* (1648), in particular a chapter entitled "Of the volant Automata,

Archytas his Dove and Regiomontanus his Eagle," a discussion of the mechanics of flying machines. Here Wilkins proposes that a spring "as is commonly being used in watches" be applied to a flying machine to give additional force to the movement of the wings. One spring would drive a wheel to depress the two wings from the top; separate springs underneath each wing would lift them up, and so drive the machine upward by flapping its wings. Likewise, springs might power wings attached to a man, provided "the proportion between the strength of the spring, the heaviness of the [man's] body, the breadth of the wings, the swiftnesse of the motion, etc." be taken into account.[8] In 1648, the year *Mathematicall Magick* was published in England, the French edition of Godwin's *The Man in the Moon* appeared and de Bergerac began work on *L'Autre Monde.*

Domingo Gonsales, the hero of *The Man in the Moon,* and a spring-driven flying machine like Wilkins' both turn up on de Bergerac's 1657 moonscape. His way of getting to the moon is a mixture of fantasy and old wives' tales, and a quite playful attempt to harness some of nature's forces. His moon voyager first fastens small bottles full of dew to his waist. The sun beats against them and raises him up just as it would mist, but carries him aloft so rapidly that he travels away from the moon. So he must break some of the vials, and lands on earth in a foreign country whose inhabitants are surprised to come upon a stranger dressed in bottles. Undaunted, he builds a flying machine; we know little about it, except that it employs a spring to move its wings. But, like the vials, it is unsuccessful, and he falls bruised on the ground. Hostile soldiers attempt to destroy the machine with explosives, but he throws himself upon it. Their fuses ignite and blast the flying machine and voyager to the moon.

What shines through in *Iter Lunare* is Russen's ingenuous fascination with new ideas. He adopts the scientific piety that the 17th century had found served the old religious beliefs and the new science so well. The earth is the creation of God; to study it is to study the book of God; everything is made according to divine plan. But this earth is only one of many earths, each also made according to divine plan, equally as good as this. The principles that hold true on this earth are not true for other worlds, since God is a God of will, not a God of reason bound to create

the one "best of all possible worlds," in Leibniz's phrase. He can create as many worlds as he pleases, not only the one world his reason determines to be most perfect. Thus, Russen writes of de Bergerac's moon men that although they seem above the laws of nature as we understand them, they might indeed exist.

Along with this sense of God's omnipotent creativity went a belief in the limitations of man's place in the universe. The sun, moon, and stars were made for purposes other than "to ripen our medlars, or enlarge the Sphere of our Cabbages."[9] Medieval world order had placed highest value on man, created in the very image of God. Once at the center of a cosmos made for him, but now aware suddenly of its vastness, he wondered whether God was always mindful of him.

Like many moderns, Russen combined forward-looking opinions with what seem to us outrageous superstitions. He believed in the "agency of invisibles," the century's phrase for witches and demons, and thought only a heretic would deny them. He believes that if we could collect moonbeams in a jar, they would endeavor to return to the moon, their proper place in nature according to Aristotle, and we could ascend in their tow.[10]

The great men of science of the 17th century — Bacon, Newton, Boyle — had turned the classical skeptical argument about the fallibility of sense perceptions into a defense of the use of reason in science. Adapting the classical example, if a straight stick appears bent in water, reason will tell us that it is really straight and only appears bent. Russen reiterates all this in somewhat garbled form. Nothing can be known with absolute certainty except in the realm of metaphysical truth. In the physical world, certainty is less than absolute, and least so in the moral sphere, where we judge in probabilities. Such is the sphere of science. Russen praises de Bergerac's account of the uncertainty of our knowledge of nature. We have only five senses, and matter is their object. Reason delivers judgement upon the evidence of the senses; it is a soaring above sense, a conversation with the divine intellect, a godlike activity. Science is the exercise of reason upon the evidence of the senses.[11]

Russen may have missed much of de Bergerac's topical satire. What most certainly did not pass him by were questions still alive in modern anthropology: cultural relativism and the nature/nurture debate. Renaissance exploration had found new civilizations on this very earth that some thought surpassed even

the European. Would there be others on the moon? De Bergerac's moon men believe that there are infinite worlds and tell the earth man that the very lice that travel from one ear to another on his head think that theirs is a world. In the language of natural theology, Russen writes, "Thus is every thing full of Animals; all things are mutually Worlds unto each other, and all parts of that one Universe, which is animated by a Principle of Life, whence all things are produced."[12] That principle of life is motion; God put motion into this universal machine at the beginning of creation.

The idea that what we think of as natural might really be cultural fascinated Russen. Could a newly-born animal be trained to walk on two feet? Do we owe our upright posture to heredity or environment? Is our language biological or cultural? De Bergerac's moon men do not communicate audibly, but by spirits, with inarticulate tones. They make trembling motions with their bodies to speak and discourse with sighs. They have no need for spoken language, nor do they use written books. They absorb knowledge from a machine, an "automaton of nature" that works as mechanically as a watch. They choose a subject they wish to learn, turn a dial, and hear a complete treatment of it in harmonious music. Russen vividly recounts all this for his English readers.

The moon men possess immortality. Just as the scientists of Gresham College transfused blood, he remarks, so the moon men transfuse their souls into the bodies of young moon men newly expired and reanimate them. The moon men also have a better method of war than we do. They pitch equal armies against one another; the learned dispute with the learned, fools with fools. Whoever has the fewest losses, wins.

De Bergerac's moon men intrigue Russen because he is interested in other divine creations. But his burning concern is how to get to the moon. He wants to overcome the obstacles divine providence has deliberately placed in man's way. He explains carefully the force of gravity and the resistance of the medium through which the voyages must be made. He thinks the earth is much closer to the moon than even Wilkins had estimated, and shows a close familiarity with Boyle's experiments with the vacuum when he writes about the influence of the atmosphere on

the moon voyagers' food.[13] He solves the oxygen supply problem by recommending that a pipe be passed back to the earth, but then realizes that this might not work, and wonders if divine providence has not placed us in oxygen for the same reasons that fish live in water: because we belong there. He handles gravity and resistance more adroitly: wait for clear weather with no meteors, ascend to the top of the highest mountain, and as the earth's gravity becomes weaker, hope that the moon's gravity will pull you toward it.

But how to overcome the earth's gravity? Domingo Gonsales had proposed harnessing moon-migrating swans, but Russen thinks they only seek a warmer climate southwards. Perhaps we should learn to fly like birds, but what about the heaviness of our bodies and the thinness of the surrounding air? A flying chariot, made much after the principles proposed in John Wilkins' *Mathematicall Magick?* Consider the force required to get it off the ground: it is a proposition of art that defies nature.[14]

Russen's idea is a spring. "Since springiness is a cause of forcible motion," could not a well-tempered steel spring be constructed whose base could be fastened to the earth, and at whose other end was a seat for a moon-voyager? Letting the spring loose by degrees, the voyager would approach the moon. His exploring done, he would get back into his seat and be pulled back to the earth by means of ropes. The rotation of the earth will cause problems, but they can be overcome somehow.

From earliest times, the spring had been a way of accumulating energy and releasing it suddenly when required. Springiness is the principle behind the bow. Later the torsion catapult put the forces of twisted hair and sinews to work, at Alexander's seige of Tyre in 332 B.C. A man named Ctesibius, also in the centuries before Christ, first proposed bronze springs for fortification, but along with using compressed air in artillery, his ideas were deemed impractical.[15]

Only armaments used springs as a source of power — until the 14th century, when springs began to replace weights as the force driving clock mechanisms. By Russen's time, the machine was the ruling metaphor for nature. According to the mechanical hypothesis of matter, nature is like a vast clock whose intricate operations were set in motion by God at the beginning of creation. All qualities derive from the size, shape, and motion of particles. If John Wilkins had proposed a spring-driven flying

machine to get to the moon, how much more modern and mechanical, then, is doing away with the idea of flight and simply propelling a man to the moon by a spring.

Technology assists man's strength. The bow shoots arrows, springs might drive wings on a flying machine. Catapults hurl stones. But to think of space travel technology as the problem of propelling an object rather than assisting its flight was an inventive step. Russen's spring was the spacecraft of the future.

But Russen was pessimistic. There might be metal enough in the world for the spring, and men and money enough to construct it. But covetousness, vice, intemperance, slothfulness, and ignorance would prevent space flight. "So that I shall despair ever of hoping for any good event thereof, till Vulcan and his Cyclops come among us to undertake it."[16]

Russen was wrong: persistence of human weakness has not prevented space flight. Our Vulcans are our astronauts — matter-of-fact, practical men. They were trying to be interchangeable with machines, and they often felt that machines were smarter and stronger than they. In a chain of a million mechanical parts, they were the weakest link, but they made the whole thing work. Like Russen, they grappled with gravity, the atmosphere, weight and weightlessness; like him, they were methodical, realistic, and, somehow, philosophically unconcerned.

Mary Elizabeth Bowen
New York

REFERENCES

1. See the excellent introduction to de Bergerac (to which I am indebted) in Geoffrey Strachan, trans., *Other Worlds: The Comical History of the States and Empires of the Moon and the Sun* by Cyrano de Bergerac (London: Oxford University Press, 1963), pp. vii-xvi.

2. De Bergerac, *Other Worlds,* p. 60.

3. Russen renames the *Comical History* "most rational," for although he found it "interlaced with much Matter of Mirth, Wit, and Invention, of things either doubtful or meerly feigned," it was also "as grave as Cato and as serious as Seneca." David Russen, *Iter Lunare* (London: J. Nutt, 1703), p. 3.

4. Roger Lancelyn Green, in *Into Other Worlds: Space Flight in Fiction from Lucian to Lewis* (London: Abelard-Schuman, 1958), calls *Iter*

Lunare heavy and humorless. But Russen is simply overlooking the fantastic and satiric sides of de Bergerac and reacting to the technical problems posed by space travel.

5. David Russen, *Fundamentals without a Foundation* (London: R. Bassett, 1698), p. 31.

6. For the history of the development of the genre see Marjorie Hope Nicolson, *Voyages to the Moon* (New York: Macmillan, 1960), the most important and comprehensive work of scholarship on the cosmic voyage in literature.

7. Francis Godwin, "The Man in the Moon," in *Short Fiction of the Seventeenth Century,* ed. Charles C. Mish (New York: Doubleday, 1967), p. 249.

8. John Wilkins, *Mathematicall Magick* (London: Edw. Gellibrand, 1648), p. 223.

9. Russen, *Iter Lunare,* p. 65.

10. *Ibid.,* pp. 56 - 57.

11. *Ibid.,* pp. 100 - 103.

12. *Ibid.,* p. 137.

13. *Ibid.,* pp. 30 - 31.

14. *Ibid.,* pp. 41 - 44.

15. T. K. Derry and Trevor Williams, *A Short History of Technology* (New York and Oxford: Oxford University Press, 1961), pp. 244 - 49.

16. Russen, *Iter Lunare,* p. 50.

ITER LUNARE:

OR, A

VOYAGE

TO THE

MOON.

CONTAINING

Some Conſiderations on the Nature of that Planet.

The Poſſibility of getting thither.

With other Pleaſant Conceits about the Inhabitants, their Manners and Cuſtoms.

——— *Sic itur ad aſtra*
Reptet humi quicunq, velit ———

By *DAVID RUSSEN* of *Hytbe.*

LONDON,
Printed for *J. Nutt*, near *Stationers-Hall.* 1703.

MVSEVM
BRITAN
NICVM

TO THE

READER.

THE following Tract will find Approbation from the Learned and Ingenious, while thoſe who are troubled with Moon-blind Intellects, like Dogs barking at the Moon, will carp at what I have written.

I know you may as ſoon perſwade ſome that the Moon is made of a Green Cheeſe, as that it is a kind of Sea and Earth, of Land and Water. They will

more eaſily believe, that the Old Moons are cut up into Stars, than that the Moon can poſſibly be inhabited. They look upon the Notion of its being Peopled a Romance; though from their Infancy they have had the Tradition of the Man in the Moon, who, ſome will tell you, carries a Bundle of Buſhes on his Back.

Ex quovis ligno non fit Mercurius.

Nor was this Diſcourſe calculated for thoſe Blocks who are ſick with the Stupidity of a lazy Ignorance.

It

The Preface.

It claims the Protection of more refined Genius's, whose Thoughts ſoar above this Dunghill Earth, and read the Divine Attributes in other Legible Characters beſides what are imprinted on this Terraqueous Globe.

'Tis compoſed of ſerious Philoſophical Reflections, intermixed with variety of diverting Thought, and as ſuch I doubt not but the Knowing will accept it, from

Hythe, March
20. 1702.

Their Servant,

David Ruſſen.

Iter Lunare

OR, A

VOYAGE TO THE MOON

MEeting with that little Tractate, entituled *Selenarchia*; or, the *Government of the World in the Moon*, written originally in *French*, by that famous Wit Monsieur *Cyrano Bergerac*, I could not read it without abundance of Delight; and having read it, could not return it to the Owner, of whom I had borrowed it, without cra-

ving a longer Day for Reſtitution: Which having obtained, and read it again, I could not part with it without making ſome Notes and Obſervations thereon; which is the Subject of theſe following Lines. Wherein, by way of Introduction, we ſhall give ſome Hints of the Book, and the ſubject Matter it treateth of.

As to the Author, I can learn nothing of him, other than his Tranſlator, *Thomas St. Sere*, tells us in his Epiſtle Dedicatory, that he was of the Army, an Employ which gives an Ingenious Spirit Leiſure and Opportunity enough to make Obſervations of this Nature. The Greek Title ΣΕΛΗΝΑΡΧΙΑ, or the Government of the Moon, is ſignificant enough; the Drift of the Author being to give us a Scheme of the Regiment of the People that inhabit that Planet, their Manners, Cuſtoms,

Cuſtoms, and other Conſtitutions, neceſſary to be known by thoſe who deſcribe any Kingdom or Common-wealth. But the Title that the Tranſlator gives it (when he calls it a *Comical Hiſtory*) ſeems to be too full of Levity, and unbecoming that Gravity which a Treatiſe of ſo ſerious Matter doth require. For though it be interlaced with much Matter of Mirth, Wit and Invention, of things either doubtful, or meerly feigned, and ſo in ſome ſence may be ranked with Sir *Thomas Moor*'s *Utopia*, Don *Quixot's Romantick Whymſeys*, or *Poor Robin*'s *Deſcription of Lubbardland*; yet is it throughout carried on with that ſtrength of Argument, force of Reaſon, and ſolidity of Judgment in the Demonſtration of things probable, that it may not be unbecoming the Gravity of *Cato*, the Serioufneſs of *Seneca*, or the Strictneſs of the moſt rigid Peripa-

tetick or Carteſian; and inſtead of *Comical*, may deſerve the Epithete of the *moſt Rational Hiſtory of the Government of the Moon.*

The Subject Matter of which it entreats, is his Journey to the Moon, the manner of his Aſcent thither, the Obſervations he there made of their Shape, Figure, Manner of Living, Arts, Sciences, Government, Products, the Amanily of the places; intermixt with many diſcourſes worth the Obſervations of the moſt Learned. Indeed, there are in it many things which among us are altogether unuſual, improbable, or perhaps, above the Power of Nature, as far as Nature is underſtood by us, or above what our Capacities can explicate from thoſe Principles we have generally received; ſuch as are his Story of *Cardan's* Moon-men; his Spirit which attended him in the

Moon,

Moon; putting Perſons in the Poſture of others to know their Thoughts; his feeding by ſmell of Meats; killing Fowl with a Compoſition that ready roaſteth them, and others of this kind; which becauſe the Principles we have in this Earth will not account for, (and yet they ſeem to be deducible from Natural Principles,) our Author hath placed them in the Moon, as the Cuſtoms of that Country, where they may paſs for Probable, on as good Grounds, as many wiſe Men conjecture that the Moon is an Earth, and like ours, Inhabited.

On this Conjecture it is, that the whole Treatiſe is grounded. That the Moon was like our Earth, compoſed of Land and Water, and alſo Inhabited, was an Opinion very ancient, maintained by many of the beſt and eminent Philoſophers of fore-paſt Ages, whoſe Principles

ciples, Arguments, and Reaſons *Plutarch* has ſet down in that excellent Diſcourſe of his, entituled *De facie Lunæ*. Among our latter Philoſophers, the Learned and Reverend Biſhop *Wilkins* hath compiled an Exact Diſcourſe, tending to prove the Moon to be an Habitable World, and that our Earth is in Lieu of a Moon to them. This, with ſome other Opinions, that not only the Moon but the reſt of the Planets and Stars are Habitable, is by the moſt thinking Perſons held ſomewhat probable, and taken *pro Confeſſo* by our Author; on which Maxim he grounds the Story of his Voyage thither.

" To paſs over his Entertain-
" ment at his Friend's Houſe, and
" his return home in company with
" others in a clear Night, when the
" Moon was at full, and Liquor
" had heated their Brains and eleva-

ted

" ted their Spirits, among variety
" of Wits they vent their frothy
" Jests and witty Notions about the
" Moon; some jesting, others
" laughing; while our Author so-
" berly and wisely gives them his
" Opinion, (pursuant to the Re-
" solves of many grave Authors,)
" That the Moon is a World like
" this, and by which ours is Inter-
" changeably believed a Moon. I shall not now stand to discant on this Opinion of our Author's; for my part I hold it more than probable, and have in some of my Writings promised a just Treatise of it. I shall refer the Reader thereto, where I shall have more leisure and opportunity to write about it, than now I have, being writing this in the midst of an * Hurry and Tatling of several sorts

---

* *The Author taught School, and wrote this in his School-room among his Boys.*

of Perſons, without the help of any other Author than our own ingenious Traveller, Monſieur *Bergerac*.

The time when this Diſcourſe betwixt our Author and his Friends hapened was, " when the Moon " was at full, the Sky unclouded, " and the Hour of the Night nine. All Particulars concurring for the more juſt and perfect Obſervation of that Plannet. She being in her Splendor and Brightneſs at the full, and in a clear Night appearing to us brighter about nine at Night, when Darkneſs hath newly drawn its Curtains over us, than later in the Night, when we have been longer uſed to it.

" Where one of the Company " calls the Moon, by way of jeſt, " the Loop-hole of Heaven; it may in earneſt have relation to that Opinion which I have met with in a certain

tain Author, and which I have elſe-where hinted at, in treating of the Subſtance of the Stars, that they were Perforations, or Holes made in the Firmament of Heaven (which is ſuppoſed to be ſolid,) through which the bright refulgent Lightſom-neſs of the *Cælum Empyreum*, or Heaven of the Bleſſed, did ſhine through to us, or become Viſible by us: Which Opinion carries in it no abſurdity in any of the fixt Stars, though in the moveable Pla-nets it will not hold good, whoſe Motion takes away all reaſonable probability, of ſuppoſing that the Light can be ſeen ſo variouſly in ſeveral Places of the Firmament, through the ſame Perforation; and much leſs will it hold good in the Moon, the Celerity of whoſe Mo-tion takes away all likelyhood of ſuch a Suppoſition. However, this may be replied in behalf of this Notion, that, according to *Des Cartes* grant-

granting the Sun to be a fixt Star, and the other fixed of the ſame Nature of the Sun, it may poſſibly be thus; whereas the Moon, Earth, and other Planets, being opacous Bodies, receiving Light only from the Sun, muſt have Motions allotted them peculiar to themſelves, and are not to be ranked among thoſe more numerous Luminaries of the Heavens, which tranſmit to us thro' a ſmall conveyance that refulgent Brightneſs of the inward Heavens, which no mortal Eye can behold in its Splendor.

" That the Moon was only the " Sun diſrobed of Light, or put " into ſome dark Body, through " which it caſts to us a Light, ve- " ry obſcure, was a Notion ſome " had ſtarted in the Ignorance of " Aſtronomy. To this our Author alludes, when he introduceth ſome ſuppoſing, " That the Sun, having " diſ-

" diſrobed himſelf of his glorious
" Rays, did (in the Moon) peep
" through a hole, to ſpy what the
" World was doing in his abſence;
whereby he ſeems again to confirm the Perforations of the Heavens: Yet will not this be allowed, except we can grant the Sun a Ubiquity; it being obſervable, that the Sun and Moon are both viſible in the Heavens at once.

The next thing obſervable, is a Notion he ſtarteth about the Communication Inviſible Agents have with us. " While his Fancy was warm
" with the Diſcourſe he and his
" Companions had held concerning
" the Moon; he, returning home,
" goes into his Cloſet, and finds
" (by ſome inviſible Hand) a Book
" removed and laid open on his
" Table, the Author *Cardan*;
" and caſting his Eye on the opened
" Folio, he firſt reads that paſſage of

" *Cardan*,

" *Cardan*, where he relates, that
" one Night, being in his Study,
" the Doors faſtned, two old Men
" of big Stature appear'd, and after
" much diſcourſe, in concluſion told
" him, they were Inhabitants of the
" Moon. I have not *Cardan's* Book,
therefore cannot ſearch whether he hath ſuch a Paſſage or not. Surely our Author would not ſet down a Forgery of ſo great a Man as *Cardan*, and make him to relate, what he hath not. Taking for granted, that *Cardan* hath ſuch a Paſſage, it is to be enquired, whether our Author only makes uſe of it, to prove Inhabitants of the Moon, or whether really, he entring his Study, found *Cardan*'s Book removed, and opened on the Table in that Leaf. If the Story be real, it is a great confirmation of the Agency of Inviſibles, and proves, that they many times ſuggeſt to us things we are ignorant of, and by ſome means

or

or other, ſatisfie us about thoſe things whereof we are doubtful ; and ſo opening this Book, placed it there to confirm his Opinion about the Moon, while his thoughts were earneſtly bent upon the Scrutiny. As to the Exiſtence of Angels, Dæmons, and Spirits, none but Sadduces deny. That every Man hath a good and evil Genius attending him, is no Novel or Ungrounded Opinion; That Angels miniſter to us, and that we have Communion with them, Divinity teacheth us ; but whether there be no other Spirits or inviſible Agents, which ſometimes appear to us, and at other times aſſiſt our Judgments, or ſerve us by ſome ſuch unaccountable means, as he here mentioneth, is a point not yet diſcuſſed: Certainly the Notion we have of Satyrs, Nymphs, Genii, Lemures, Hobgoblins, Mumms, Spirits, Fairies, and ſuch like, hath ſome ground of

of Truth, and though clouded with Fables, yet 'tis to be noted, all Fables are grounded on ſome certainty. But where theſe inhabit, whether in the Earth, as ſome relate they are to be found in Mines, or in the Air, or in the Stars or Moon, is not by us to be determined. We know not what may be or dwell in thoſe places whither we cannot come. The ingenious Anthor of the *Turkiſh Spy*, Vol. VII. Lib. III. Lett. X. hath a relation of himſelf not far different for kind from this, though the Circumſtances were variable; where he relates, " That " being ſeiſed with a violent Fit of " vomiting, he earneſtly longed " for an *Arabian* Orange, and ſend- " ing to buy ſome, his Meſſen- " ger ſtaying long, and at laſt re- " turning with *Spaniſh* ſower Oran- " ges, they in the mean time found " lying on the Table an excellent " *Arabian* Orange, which he greedi-

" ly

ly eat, and recovered his Health. He very curiouſly ſearcheth into the occaſion of its coming there, ſuſpects Legerdemain; but finding none could be uſed, concludes; "That "poſſibly there may be an Order of "Officious Beings inviſible about "us, who have the charge of Mor-"tals commited to them, and are "obliged by the Laws of their "concealed Kingdom, to aſſiſt us "in extremities. And certain it is, an obſerving Perſon may take notice of ſome extraordinary Paſ-ſages in the Courſe of his Life, of which he can give no rational ac-count, but muſt with our ingenious Traveller to the Moon, place them on the ſcore of Preternatural Cau-ſes, and explicate them by the officious Services of thoſe kind Agents which inviſibly aſſiſt and in-form us.

Our

Our Author's Mind being encouraged by this unuſual Accident, and reflecting upon what the Poets feigned of *Prometheus* aſcending to the Sun, he reſolves upon the Enterprize; about which we conſider,

1. What may poſſibly hinder our Aſcent to the Moon.

2. What is to be thought of thoſe Means ſome have propoſed, and our Author uſed.

To aſcend to the Moon is a matter of no ſmall difficulty. It may juſtly be queried, whether the power of natural Cauſes will be ſufficient to convey thither any Terreſtrial Body from the Globe of this Earth, we having no certainty that the Moon and Earth are of one Nature; or that the Air which encompaſſeth

compaſſeth our Earth, or the *Aura Ætherea* which lieth betwixt that and the Moon, will admit of a paſſage. And we may not unrightly conjecture, that Divine Providence hath laid in our way thoſe Impediments, which though they cannot hinder our Contemplations from aſcending, yet oppoſe our corporeal Conveyance thither, he having debarr'd us from bodily converſing with thoſe ſuppoſed Inhabitants.

Two things ſeem to impede our Journey thither, the propenſity of all Earthly Bodies compoſed of Matter to tend downwards, which cauſeth in them an Ineptitude to aſcend, and the Medium through which they are to paſs, which is unfit for Animals of this Earth to breathe in. As for the diſtance, it is no Eſſential hindrance, ſince, were it farther, it might be ſur-

mounted

mounted with Labour, and time proportionably allowed.

As to the propenſity of material Bodies to deſcend, whether cauſed by the magnetical Attraction of the Earth, by the direction of all things to the Center of the *Terraqueous* Globe, or the outward Impreſſion of the Air, it is all one, ſince we find ſuch a Property in all things, (Fire and Air excepted,) it will materially hinder an Aſcent to that heighth requiſite to gain the Orb of the Moon. And therefore whatever means of Aſcent can be invented, they muſt be violent and præternatural, artificial, and done by ſome kind of Mechaniſm, either Vital of Birds, or Inanimate, yet forcible by Springs or Inſtruments; which whether any can effect, is a matter of Controverſie.

Nor

Nor will the Mediums through which we are to paſs, leſs hinder our Flight. For the Atmoſphere of the Air which encloſeth us, being ſometimes depreſt and nearer to us, ſometimes rarified by the Sun, and ſo carried higher above us, yet like the middle Region which the *Peripateticks* held, will be always ſo cold, ſharp and piercing, that it will Freeze us; no fence of Cloaths, Liquors, Fire, or other Invention being ſufficient to maſter it. Or it will be ſo Wet, Rainy, Foggy, and full of Water, that it will Wet, Clogg, Choak or Drown us; or perhaps ſo peſtered with Snow, Hail and Ice, that it will oppoſe our Paſſage, and like Rocks or Sands in the Sea, will Shipwreck us, for we have no other knowledge of thoſe Meteors which encompaſs us than by conjectures taken from thoſe Matters which fall down upon us from thence,

and the more we conſider what falls from them, which ſometimes is ſo violent, that we ſeek our Houſes Hedges or Rocks for ſhelter, the more ſhall we find the difficulties when we come to wade through thoſe Fountains of Rain, Hail, Ice and Snow, whoſe droppings we can ſcarce endure here below.

Indeed, thoſe difficulties may in ſome meaſure be avoided by taking the Journey, in a Calm, Serene, and clear Sky, free from Clouds Miſts and Vapours, yet ſince the Aſcent is tedious and difficult and muſt neceſſarily take up ſome time, we are not ſure but the Wind may change and a Torrent of thoſe Meteors may meet and ſtop us in our Courſe, as the Tide many times Flows, and ſtops the Marriners Paſſage; when the want of Wind hath not carried him far enough on his Voyage.

But

But could we be aſſured no Clouds would intercept our Paſſage, yet how can we Promiſe, that no Winds will meet us and carry us away out of our Courſe, as Ships many times are driven by their violence, and forced to ſteer a contrary way.

If to avoid this inconvenience we ſhould climb the tops of the higheſt Mountains, and as did *Domingo Gonſales* aſcend to the top of *Teneriff*, where, as ſome ſay, all windy and watery Meteors are ſurmounted and launch out into the *Aura Ætherea*, how ſhall we anſwer theſe Queries.

Whether ſhall we move forward, backward or ſidelong?

How ſhall we draw our Breath? and,

How ſhall we be ſuſtained with Food?

As to the *Aura Ætherea*, or the pure Air, (above this Atmoſphere of Meteors, which perhaps at the utmoſt diſtance or heighth of twenty Miles encompaſs us) we cannot certainly tell what it is; if Fire, as ſome of old held, then the Paſſage is moſt unlikely, but at the beſt, it is concluded to be a pure, thin, rarified Air, free from humidity, Wind, Rain or cold. Now ſince our Bodies are compoſed of mixt beings, particles as different as what ſome call the four Elements, which render them ſolid, heavy, and impaſſible, how can we conjecture, they can abide or move forward, in an Element wholly pure and unmixt. For not only are our Bodies unfit to abide therein, but the fluiditity of that *Æther*, will deprive us of all Progreſſion. For Progreſſion or going forwards here below, is cauſed by a violent Motion of the joynt and

and part of the Body, it is a Protruſion or thruſting forward of part, while the Feet, Legs, Hands or Arms, ſtanding firm on the Ground, the Spirits and Organs of Motion, by a kind of force thruſt forward the Body, and by conſtant Iteration of the Protruſion, the Progreſſion is continued, now this cannot be done, by Man in the Water, which is ſomewhat ſofter, but by a kind of Artificial ſwimming, much leſs in the Air, where is no Foundation. Add that Birds whoſe proper Region is the Air, and who naturally Fly in it, do it by the ſame kind of Protruſion with their Wings, as Men with their Feet. Yet do often alight on the Ground, not only to ſeek their Food, but to reſt them when weary in flying, and never Sleep but on the Ground or ſome ſtedfaſt place. If a Man walking on the Ground, which is full of Beach, Stones, or-

looſe Sand, is ſoon wearied becauſe that looſe Ground gives way, that he cannot ſet his Foot ſteady, how much more unlikely is it he ſhould go forwards, when he ſtands on a Foundation, thinner than Water; and like *Noah*'s Dove, can find no Place whereon to ſet the ſoale of his Foot. Surely he can make no Progreſſion, but muſt rather abide ſtill, than as ſome have thought go ſwifter forward, when impediments are removed, not conſidering that the cauſe of Progreſſion, which is a firm Foundation is alſo taken from them. And if in this *Æther*, there be any Stream, Flux or Tide, they muſt be carried which way the Current drives them.

If it be queried how ſhall we draw our Breath? 'Tis anſwered the *Aura Ætherea*, is altogether unfit for reſpiration, by reaſon it is ſo far

far rarified pure and unmixt, that it would ſo ſuddenly intrude upon our Vitals, that we ſhould not die for want of, but with, too much Breath, the Lungs would be ſoon filled with ſuch a quantity of this thin matter, that it would not eaſily emit it. Experience tells us, that if the Noſtrils be not ſtopped with Excrements or *Pus*, the Air ruſheth in too ſuddenly and hurts the Brain; if the Ears be picked and too open, or free from wax, the ſound, which is Air moved, ruſheth in with too violent a noiſe, and ſeemeth for a while to ſtunn us; ſo the Eyes are blinded with too great a Light, and wherever any abundance oppreſſeth the Organs of Life, they are overcome abſorpt in it, or drowned thereby even ſo will this thin Air drown and overcome the vital Parts by too ſudden a ruſhing in, and in too great an abundance. Some have

told us, that the tops of high Mountains have the Air ſo very thin, that they cannot breathe without wet Spunges applyed to the Noſe, how much thinner then will they find the Body or groſs Sea of this Air, when its Edges or Sides are ſo rarified, though mixt with the Vapours of our thicker Air? And whereas Fiſhes draw in Water by their Gills, and emit it again, which to them is a kind of breathing, the Water being to them, as the thickn'd Air is to us, yet taken out of the Water ſuddenly die, by reaſon our Air is too thin for them to live in; ſo ſhould we depart out of this thickned Air, (which is to us as Water to Fiſhes) into the thin *Aura Ætherea*, we ſhould as ſoon be deſtroyed by them, as Fiſhes are by this. And as the Water is too thick for us to breathe in, and therefore ſuffocateth us, ſo the

Aura

Aura Æsherea is too thin, and will ſoon overcome us. God hath placed us in an Air or Mediumm qualified through both, that we ſhould there abide without ſeeking (other than in contemplation) to depart elſewhere, leſt on the one hand the Water drown us, or the Air devour us. Againſt this Inconvenience ſome have propoſed the uſe of wet Spunges applied to the Noſe, which would thicken the Air we draw in, and hinder its too ſudden Irruption. But doubtleſs as a little Water is ſoon abſorpt by the Wind, or dryed by the Sun, ſo would all our Spunges, Waters and whatever we have about us, be ſoon devoured and dryed up by this thin Air, which may be compared to an Eaſt-wind, or a hot Summers-day.

I have heard of Engins with which Men dive under Water, with long Pipes reaching above the ſurface of the Water, by which they ſuck in Air, a Pipe of this Nature reaching through the *Æther* to the Orb of our thicker Air, would be a means to remedy this Inconvenience, yet we know not its length, and how far the diſtance is, which till various tryals have diſcovered, we ſhall be ſtill uncertain of. However, could the thing be done, and ſuch a Pipe made of what Mettal, Matter or Subſtance ſoever; yet 'tis to be feared, the *Æther* would paſs through its Pores, and drink up the Air received from our thicker Air, or obſtruct is Paſſage, by filling the Tube with thin Air.

And ſince all Motion, and Progreſſion, is a Labour of the Body, which waſteth the Spirits, and cauſeth

cauſeth wearineſs; it will be requiſite, that Food be provided for the Journey, and care taken for conveniency of Sleep, which will be a ſort of Luggage, that will clogg us in our Journey, and make our Aſcent the more difficult, the force that drives or carries us forwards, muſt be proportionable to the weight, and therefore, ſtronger than if this Luggage was removed. And 'tis to be ſuppoſed, no Inns, Ale-houſes, or Places of Entertainment, are as yet built in that Pathleſs way to the Moon.

To victual our Camp, ſo as to ſuffice for a Viaticum on the Way, will require good Skill and Prudence, that we may have ſufficient to ſerve in a Paſſage, whoſe diſtance is unknown, and the time it will require is uncertain. Yet the more we take with us to prevent

vent a Famine, the more Luggage we ſhall have to encomber us, and this requires a greater carriage, all which will encreaſe the weight, and make the aſcent the more difficult, ſince the leaſt crum of Proviſion will not aſcend without ſome Extrinſick force to drive it forwards. And conſideration muſt be had of the kind of Meats; ſince we ſhall be unprovided of Kitchens to Boil, Bake or Roaſt, that we muſt carry our Meats ready dreſt. Yet hereupon ariſeth a great difficulty, ſince the alteration of the Air here below doth corrupt our Meats, mouldy our Bread and turn our drink Eager, and in ſhort time reduce all to a Powder or dry Earth, how ſhall we be ſatisfied that the Atmoſphere of Air, through which we muſt neceſſarily paſs, will not putrifie our Viands, and the *Aura Ætherea* by its thinneſs wholly reduce it to a

Caput

Caput Mortuum, or meer Earth? Of this *Gonzales* was aware, though miſtaking the natural Cauſes, he aſcribes it to the Deluſions of evil Spirits; for where he tells us, that thoſe Inhabitants of the Air, preſented him a repaſt of a Bottle of Sack, and ſome excellent ripe Fruits; when he came to uſe them he found the Sack reduced to an Inſipid Water, and his Fruits converted to dry Leaves, which he aſcribes to Deluſion; but the more natural Cauſe ſeemeth to be the Operation of the Air through which he paſſed, which had corrupted them, and which hazzard under this Fiction he propoſeth to our caution.

To avoid this difficulty, ſome have ſuppoſed we ſhall become Saints and Camelion like live only by the Air, grounding this perſwaſion on a ſuppoſition, that we

ſhall

ſhall find there a free Paſſage without Labour, and ſo need no Food to refreſh us; but they muſt firſt ſatisfie us the Paſſage is ſo eaſie; but we have before ſhown there is no Progreſſion without Labour, and conſequently there is neceſſity of Food, it will require a ſtrong Faith to feed on the Muſick of *Pythagoras* his Spheres, on the Conſecrated Euchariſt of the Papiſt, or to think with the Poet, that the Etherial Air being immixt and void of Vapours will Nouriſh us.

——*Veſcitur Aura.*
Ætherea.——

If all theſe difficulties can be overcome, if it be eaſie to aſcend from the Earth, if the Atmoſphere of Air can be waded thro', if the *Aura Ætherea* be Habitable, if Victuals and other neceſſaries can

can be provided we are then to consider what means must be found to convey us thither. Before I consider that take these Conclusions.

That the Atmosphere of Air which encompasseth our Globe, is at most not above 20 Miles from the Superficies of the Earth.

That the higher we Ascend, the less weight we have.

That the *Aura Æthereæ*, is pure, thin and rarified.

That in it we have no Gravity, and consequently no propensity of descending.

That the Moon is encompassed, with an Orb of Vaporous Air like the Earth.

That

That when we arrive within the Sphere of the Moons activity, we ſhall as naturally deſcend to it, as now we do towards the Earth.

Theſe are the ſeveral Regions through which we are to paſs, what carriages we ſhall have is our Enquiry, and *hic Labor hoc Opus.*

The firſt attempt I have met with was that of *Domingo Gonſales*, who made uſe of certain Geeſe, called by him *Ganſa's*, found in the *Indies*, which being a Bird of great ſtrength, and long flight, he had trained up to fly with an Engine faſtned to them, wherein each bearing a due weight and proportion, would according to the number of Birds, and the weight they carried, fly a conſiderable way in the Air, and alight at a place deſigned

ſigned ; or according as he ſitting in his Engine, did with a kind of Bridle rein them in. This Invention he had framed for his own uſe, to ſerve as a more ſpeedy carriage, by flying over the Earth, as Birds uſually do, but as he tells us, it being the Nature of this bird, at a certain Seaſon of the Year, to fly up to the Moon, whence they return again the next Spring, it ſo chanced that being with them on the Mountain of *Tenerif*, yet that Seaſon they Voluntary took a flight to the top of the Pike, and from thence into the open Air, where they kept ſtill going forward till they arrived with him in the Moon, where he tarried, having found it inhabited, and at the return of the Spring returned again with his Birds to the *Indies*.

This

This Invention is grounded on a Suppoſition, that certain Animals ſeen among us in the Summer, and not to be found in Winter, do at the approach of the cold, fly away to the Orb of the Moon, whence they return again at the Spring; among which are reckoned Swallows, Locuſts, theſe *Ganſa's* and a great *Ruck* or Bird found in *Madagaſcar*. 'Tis true certain Animals which we have in Summer, forſake us in Winter; thoſe who held the Moon Habitable, would have them return thither; though moſt probable Conjectures conclude, they only ſeek ſome warmer Climate farther Southwards. As our Bran-geeſe, and other Water-fowl come from *Scotland* in the midſt of Winter, and feed in the Rivers on the South part of *England*, where the Seaſon is not ſo pinching; the like do Velvars, Stares, Threſhes, and other Birds of the

Land

Land which inhabit altogether the Woods and wild Fields in Snow and Frosty Weather, approach to habitable Towns, where the Air is warmer. As for Swallows, 'tis believed they Sleep in the Winter: 'Tis evident in the Bat, Dormouse, Silk-worm and divers Insects, though *Gonsales* tells us, that in his Passage to the Moon, he met with a great Cloud of Locusts, it being then found by experience, that many Animals at certain Seasons forsake us by change of Climate, or retiring into the Earth, it is most probable that the Opinion of their flight to the Moon, was only a supposition to perswade us the Moon was Habitable; and on this Ground, and in order to a Passage thither, *Gonsales* inventd the Story of his *Lunar Ganса's.*

Another

Another Invention hath been to imitate Birds, and cauſe Men to fly by application of Wings to their Bodies. *Gonſales* tells us, that ſome Inhabitants of the Moon uſe this Artifice: The Poets feigned *Mercury* was winged, and that *Dedalus*, with Wings applyed to his Body, fled over the Seas, but theſe have their proper Explication, *Mercury's* wingedneſs ſignified the Omnipreſence of the Divinity; in its ſudden Intuition on humane Actions; and *Dedalus* was only the Inventor of Sails to Ships, which the Poets called Wings. 'Tis natural for Birds to fly above the Earth, their Bodies are lighter than other Animals, their Feathers buoy them up in the Air, and the Feathers of their Wings with which they beat

beat the Air, are knit, in with their very Bones, Nerves, and other Organs of Motion. Yet they often grow weary, and ſeek the Ground to reſt them on. Now Man is made without this Inſtrument of Wings, or Feathers, an Animal more heavy and groſs than Birds, and can only imitate them in ſwimming in the Water; which though a thicker Element than the Air, yet lets them ſink in it, without their conſtant Motion in ſwimming, and this Conſtancy cauſeth a Wearineſs in a few Hours, which cannot be endured without reſt.

Now ſhould Man apply Wings to his Body and with them beat the Air, as the Air is thinner than Water, ſo will it require a greater agitation to cauſe ſo heavy a Body, as Man is, to aſcend,

and

and this Labour will ſoon produce ſuch a Laſſitude, that being tired and unable to Labour more, he muſt fall down headlong, * and like the *Turk* in *Conſtantinople*, who would fly from an high Tower, break his Neck; which has been the Common ſucceſs of ſuch vain attempts. I grant by ſuch means Men may become lighter, the Feathers and Wings buoying them ſomewhat upwards, but it will never reach ſo high as the Moon and that *Onus alarum*, which in Birds farthereth their aſcent, would to Man be indeed a Burden; for the Feathers being Heterodox to Man's Body, and only accidents applyed by Art, will have a weight of their own a propenpenſity to deſcend, and will re-

* Knolls Turkiſh *Hiſtory*.

quire

quire an equal Proportion of ſtrength in Man, to lift them up together with his Body. As a Man in his Clothes is heavier than without them.

A flying Chariot hath been by ſome propoſed as a means to aſcend thither: And this may be made after the Principles of Mechaniſm, by which the wooden Dove of *Archytas*, or the Eagle of *Regiomontanus* was fram'd. In which Engine a Man may ſit and give ſuch Motion thereunto as may carry him through the Air, with *Viaticum*, and all things elſe neceſſary; and if ſuch a thing can be framed, may ſerve not only for one, but for many Men, with their Neceſſaries; it being not the weight which hinders motion, where the ſtrength or principle of motion is proportionable thereunto. The learned Biſhop *Wilkins* ſays, He doth

doth ſeriouſly, and upon good Grounds, affirm it's poſſible to make ſuch a Chariot. And there is lately come abroad a Treatiſe under his Name, tending to prove it. I have not ſeen it; whether it will anſwer the end propoſed, I know not; but this I think, that if it fail in the main Deſign, yet coming from ſo learned a Pen, it muſt needs be an excellent Eſſay towards the perfecting of Mathematical Mechaniſm. But to examine the probability of ſuch an Invention, we muſt conſider, that the Matter of which it muſt be framed, will be naturally heavy, and apt to deſcend; That the Principle of Motion, or Aſcent upwards, muſt be forcible, both to carry up the Engine, and the Materials laid in it; That this Motion muſt be cauſed by Springs, Wheels or Weights, and thoſe muſt be complicated within the Body of the Engine.

Now,

Now, though every part of the Work may move together, as the Spring ſets all the Moveables in a Watch a-going, yet that this will cauſe it ſtill to aſcend upwards, is no more conceivable, than that a Watch ſhould turn round, becauſe the Wheels within it do ſo; for the whole Watch, as it is one entire Engine, is immoveable any way, though every part moves regular in its own place. But to cauſe this Aſcent, will be required ſome Baſis on which to faſten it, which may raiſe it up; but then the forcible Aſcent will ceaſe, when the Spring which raiſed it hath ſpent its Strength; and ſo the whole will again deſcend, except we could diſcover a Perpetual Motion; which Problem hath hitherto puzled the wiſeſt Heads, and is reckoned among the number of impoſſibles; as, I preſume, ſuch a

Chariot may likewiſe be account-ed ; though I deſpair of nothing: For none knows the Power of Nature and Art, when combined. Yet when Propoſitions of Art are made meerly againſt Natural Prin-ciples, the matter muſt remain among thoſe things that are, for the moſt part, doubtful.

Let me add another Propoſiti-on, as likely as any of the for-mer, though as difficult to be procured. Since Springineſs is a Cauſe of forcible motion ; and a Spring will, when bended and let looſe, extend it ſelf to its length ; could a Spring of well-tempered Steel be framed, whoſe Baſis being faſtned to the Earth, and on the other end placed a Frame or Seat, wherein a Man, with o-ther neceſſaries, could abide with ſafety, this Spring being with Cords, Pullies, or other Engins bent,

bent, and then let looſe by degrees by thoſe who manage the Pullies, the other end would reach the Moon, where the Perſon who aſcended landing, might continue there, and according to a time appointed, might again enter into his Seat, and with Pullies the Engine may again be bent, till the end touching the Earth, ſhould diſcharge the Paſſenger again in ſafety. If it be objected, that the Diurnal Revolution of the Earth will carry away the Baſis of the Engin, and the ſwift Motion of the Moon Eaſtwards, will alter the Spring, ſo that it will be uncertain when it will touch the Moon; I anſwer, That 'tis leſs difficulty to overcome this Hazard, than to fly to the Moon, or frame flying Chariots; for time and place muſt be proportioned. Let the Baſis

be placed on ſome of thoſe high Mountains, whoſe tops ſurmount the Clouds, which as it will occaſion that the Engine may be ſo much ſhorter, ſo will abbreviate the Paſſage, and be a great Part of the dangerous way through the middle Regions of the Air, and avoid thoſe Vapours of Rain, Snow, Ice and Wind, which would there be met with. The time of aſcent muſt be when the Moon is in the full in *Cancer*, and the Engine muſt be ſo order'd in its aſcent, that the top thereof may touch the Moon when ſhe comes to the Meridian. So the Journey may be made every Year, going hence, the Moon being in *Cancer*, and returning when ſhe comes to the ſame place again. Beſides, Signals may be agreed upon which thoſe above may make,

to

to thoſe below, as occaſion offers; which Signals may be diſcerned below, by thoſe Teleſcopes which diſcover Hills, Valleys, and Rivers in the Moon. And I chuſe *Cancer* as the fitteſt, becauſe that the Moon is higheſt in the Northern Signs, and neareſt to the high Mountains of *Aſia*, whereby the Engine may be the ſhorter; ſhe then alſo is longeſt above the Horizon, and at the full gives moſt Light; whereby particulars may be beſt diſcerned. Yet care muſt be taken, that the Moon's Motion be exactly Calculated, and the time of the Engines aſcent muſt be accordingly proportioned, that it may juſt touch the Moon when ſhe comes on the Meridian, otherwiſe the Motion of the Earth will carry away the Engine, and the Moon will

be the next day ſo changed in Latitude, that the Work muſt be let alone till the next Year. Due care alſo muſt be had, that the Moon's diſtance from the top of the Mountain be exactly known, that the length of the Engine may be proportionable; though it be better the Engine be rather too long than otherwiſe. Other contingent Matters I need not ſet down. If any Man's Ingenuity will carry his Induſtry to the doing ſuch a Work, his Skill will ſupply other things. I have only framed a Foundation, on which others may build. Yet this I will add, that it may be done at any other time, or place, or at any time of the Moon when ſhe is in any Sign, or Degree, at the Change, in Trine, Quartile, or Sextile with the Sun, her Motion being duly calculated, and the diſtance rightly meaſured from

from the place of aſcent. When *Archimedes* propoſed the making an Engine which ſhould be of force to remove the World out of its place, he wanted another World as a Baſis to place his Engine upon, and his deſign was fuſtrated. So flying in the Air, flying Chariots, *&c.* will prove abortive, becauſe they have no firm Foundation or Baſis to cauſe Progreſſion by a ſtedfaſt Station, which is neceſſary to Protruſion. Now I think it poſſible in Nature to Effect ſuch a Spring, as I propoſe, though 'tis a Query if Art will not be defective. There is Mettal enough in the World of Iron or Steel to compoſe it, Men enough may be had to frame it, Firing enough to work it, and Money enough to defray the Charges; but Covetouſneſs, Vice, Intemperance, Slothfulneſs and Ignorance

rance hinder thoſe who have abilities ; and ſuch is the Poverty of thoſe (whoſe Parts and Ingenuity, joyned with Induſtry, would prompt them to accompliſh it) that they cannot perform what their Wills would undertake, if able. So that I ſhall deſpair ever of hoping for any good event thereof, till *Vulcan* and his *Cyclops* come among us to undertake it.

It is time we return to our Author whom we have ſo long left, and examine theſe two methods he hath pitched upon, as a means for this aſcent. He tells us, " That he faſtned about him " many ſmall Vials filled with Dew, " upon which the Sun darting " violent Beams, the heat thereof " attracting, as it doth, the groſ- " ſeſt Clouds, drew him inſen- " ſibly above the middle Region.

That

That the Sun will rarifie the Dew, and that ſhining through Glaſs, its heat is augmented, whereby the Dew will be more rarified, is owned; but whether the heat of the Sun's Beams will attract and raiſe the Vials upwards, is a Querry, of which, I think, as yet no Experiment hath been made: It may rather be doubted, whether the Rarifaction of the Dew will not cauſe the Vials to break. However it be, this Invention will no way ſerve the turn, for himſelf acknowledgeth, "That it miſcarri-
' ed by two Inconveniences.

" 1ſt. That the Attraction was
" ſomewhat too rapid; and,
" 2d. That inſtead of approach-
" ing the Moon, he was farther
" off; for the Sun, which firſt
" lifted him up, drew him towards
" its ſelf.

And this Invention may ſerve for a Journey to that Planet, but not to the Moon: and this will no way be beneficial by Night in the Light of the Moon, whoſe Beams are of too languid a Light to attract any thing. However our Author here ſeems to tax two Opinions of ſome Fautors of this Moon-Voyage.

1ſt. That a Man being above the Atmoſphere, may walk freely in the Æther: Which, as it cannot be, becauſe there is no ſteady Baſis to cauſe a Protruſion in order to Progreſſion, ſo the Sun, by reaſon of his Vials, did violently attract him; and when he had broken ſo many of his Vials, that the force of the Sun was of no Efficacy, he was ſo far from ſtanding ſteady, or going forwards, that he ſank down to the Earth.

2d. That

2*d*. That above the Atmoſphere we ceaſe to be heavy; or, that there is no Gravity, as being out of the reach of the attractive Force of the Earth, or above the Depreſſion of the Atmoſphere of Air; for having broken ſome of his Glaſſes which buoy'd him up, till his weight had maſter'd the attraction, he began to deſcend towards the Earth. Yet he fell not headlong, becauſe he had left ſufficient, which by the Sun's attraction weighed him up that he fell gently down.

His next attempt was ſome kind of flying Engine, of which he hath given us no deſcription how it was made; " only we find it " had in it a Spring, and Springs, " which would agitate its large " Wings; with this Engine (being " placed in it) he precipitated him-

" himſelf from a Rock into the " Air : But his Device failed " him ; for having not well ta- " ken his Meaſures, he rudely " fell down and ſaluted the " Valley with his Bulk. This fall ſeems to have baulked any farther Enterprize, till an accident performed that which he leaſt expected. His Bruiſes makes him ſeek a Remedy to eaſe them ; he anoints himſelf with Beef-marrow, and then returns to ſeek his treacherous Engine, which he found poſſeſſed by a rude rabble of Souldiers ; who having found it, and wondring at its Contrivances, faſtned Fire-works to it, to elevate it in the Air ; which he finding in that condition, violently thruſt himſelf into it to ſave it ; but while he was in it, the Fire-works went off, and carried him, Engine and all, into the Air, ſo high, that the Powder being ſpent,

ſpent, which had raiſed him up, his Engine fell from him towards the Earth, and he was himſelf carried directly towards the Moon; but not by reaſon of the Stabili-ty of the *Æther*, but by the attracti-on of the Moon. The reaſon of which he draws from an Opinion, that the Moon predominates over moiſt things, and that being in the de-cline, as ſhe then was, doth exhale the Marrow of Animals; he be-ing anointed with Beef Marrow (to eaſe his Bruiſes) the Moon did draw him towards her, by puffing up his Skin, which was greaſy with the Marrow, and ſucking his own Marrow, and that with ſo much the more force, as he was nearer her Globe, or the Interpoſition of Clouds did not weaken her Vigour. And here again he condemns the Opinion of the paſſability or ſo-lidity of the *Æther*. For the Moon drew him by Vertue of his

Marrow

Marrow, and his Engine fell downwards on the Earth; which alſo demonſtrates, that Bodies above the Atmoſphere are not devoid of Gravity. Now whether the Moon in her Wane doth attract the Marrow of Animals, is a thing queſtioned; but whether ſhe will attract a Body anointed with Marrow, is a thing to be doubted; and I fear ſhe would ſhow them a ſcurvy Fall, who truſting to ſuch a Maxim, ſhould caſt themſelves off from ſome high Place. However our Author hath propoſed two ways of aſcending by attraction; of which, if neither will ſerve the turn, yet it may put ſome Ingenious Heads on thinking of ſome other. And could the Rays of the Moon be collected in ſome large Veſſel, it is probable that would be a means to aſcend, the Rays endeavouring to return to that

Body

Body from whence they proceeded, the Moon likewiſe endeavouring to recover that vvas taken from her. But this I ſhall leave for others to improve.

The Invention his Friend uſed, vvhom he ſays he met in the Moon, vvas a pretty device, yet ſeems not ſufficient.

" It was a Chariot, Seat, or
" Chair of Steel, made thin and
" light, exactly poliſhed; in which
" he ſitting, caſts into the Air a
" Ball framed out of a Load-
" ſtone, well purged, precipita-
" ted and diſſolved, till the at-
" tractive Calcined was drawn;
" which Ball caſt up aloft, drew
" the Chariot up into the Air;
" and then returning to the Cha-
" riot, was thrown up again;
" and this ſo often reiterated,
" till it had conveyed him to the
" Moon,

" Moon, and that without any
" precipitation, by reaſon that
" the Ball caſt on ſeveral ſides of
" the Chariot, did retard its de-
" ſcent upon the Earth of that
" World.

Now this Device is plauſible; for the Magnet will attract Iron or Steel, thoſe Metals ſeeking very earneſtly a ſtrict Union to the Loadſtone; and a Stone heated and Chymically prepared, grows much ſtronger, and attracts with the greater force; and being caſt up, would not fall beſide, but return directly to the Chariot; becauſe, as he ſays, they mutually drew one another. But when he tells us, that holding the Bowl in his Hand, he aſcended, the Chariot it ſelf following the Bowl that was above it, I can hardly credit it. 'Tis true, that holding the Bowl in his Hand, his Engine (the Seat whereof

preſs'd

preſs'd him to approach its Attractive) might not forſake him; but that the Bowl ſo held, ſhould cauſe his Aſcent, is doubted but 'tis rather to be thought the Bowl being held ſtill, the Chair, Man and Bowl being by that means contiguous, they deſcended together; as a Watch, though every part move round by force of the Spring, yet the whole Frame, as one Body, is immoveable, and ſtirs not at all, without ſome outward Force applyed to it. Add hereto, That a Magnet it ſelf is a heavy Body, being caſt into the Air, will deſcend again, and draws not Iron except it ſelf be fixed. 'Tis a great Query, Whether it being caſt up, it will attract any thing when it is in its deſcent, that Quality ſeeming to be loſt, while the Stone is in motion downwards. Now though the Stone caſt upwards, which is

a violence offered to it, may attract the Chariot, yet in its deſcent, it is reaſonable to conjecture, the Chariot likewiſe deſcended; ſo that it is poſſible the Chariot may be held at a ſtay from falling, yet could not aſcend, becauſe as much as it was drawn up, while the force of the caſt did continue, ſo much did it deſcend, while the Ball was returning to it; and though the Ball held in the Hand would keep the Chariot from falling away, yet would it not cauſe an aſcent, there being nothing but the violent caſt of the Ball that could cauſe the Ball to aſcend: So that they being all held together, and every time the throw was repeated, it muſt continue ſome time in the Hand; 'tis rather to be thought, the Chariot and his Rider did deſcend, more than aſcend, though perhaps not with

with that precipitancy as they would, had he not had the Ball to ſupport him.

Theſe are all the means or ways I have have heard of or thought upon, which have been propoſed as a means to aſcend to the Moon; all which I hold vain and ineffectual; their Inſufficiency I have in part already demonſtrated. None but the *Gan-ſa*'s hath any kind of likelihood: But it is yet to be proved, that they, or any other Animals, fly betwixt the Moon and the Earth. As for the Story of thoſe, who with our Author, pretend to have went thither, they are feigned Relations, under which they have endeavoured to teach us probable, yet doubtful, Principles. I, for my own part, do rather think the Moon to be Water and Land; if not in the whole,

whole, yet in part, bearing ſome proportionable likeneſs to ours. That it is habitable I cannot gainſay, I am inclinable to think the Affirmative: What kind of Creatures they are, what Diſpenſations of Providence they are under, what Laws governed by, what attributes the Divine Being doth manifeſt to them, of which we are Ignorant, is known only to the God who hath made them. But that we ſhould aſcend to them, or they to us, I hold not poſſible, Divine Providence having fixed betwixt us and them ſo great a Gulph, that while we dweſl in theſe Tabernacles of Clay, we muſt content our ſelves with this Earth he hath allotted us, reſerving the farther Enquiry hereof till a future Eſtate, when more of the Infinity of God's Works ſhall be diſcovered to our Underſtandings.

But

But we muſt return to our Author, and look backwards upon ſome Advantages that happened to him while he was accoutred with his *Aqua-Vitæ* Bottles, as a *French* Soldier pleaſantly called his Vials of Dew.

He tells us, " That the Sun " having drawn him directly to- " wards its Globe, by the Rari- " faction of the Dew in his Vi- " als, he broke ſome, that he " might again deſcend; which " he did in a Right Line: But " in coming down, inſtead of " alighting near the City of " *Paris*, two Miles from whence " he had aſcended, he found " himſelf now in *Canada* in the " Province of *New France*, in " *America*; and inſtead of Mid- " night, which he expected to " have found, he found the Sun

" in

" in the Meridian. The reaſon of vvhich he aſcribes in his fol-lovving Diſcourſe vvith the Vice-" Roy, " to be the Diurnal Re-" volution of the Earth. For the Sun being the Center of the U-niverſe, had dravvn him in a Right Line to its ſelf; vvhile the Earth, vvhich beneath him, had rolled under him, received him juſt upon that Province vvhich vvas turned tovvards him, and had the Sun in the Meridian.

Indeed, as the Vice-roy well re-plied to him, this Accident might be reſolved by the Revo-lution of the Sun round the Earth; which as it did attract him to himſelf by Vertue of his Vials, ſo it alſo might carry him round with him in its Diurnal Revo-lution round the Heavens. How-ever, he ſeems in his reply to have given more probable Rea-

ſons

ſons for the Earths Revolution, and clears the Syſtem of *Copernicus* from the Knots and Rubs which entangle that of *Ptolomy*; which, as it is the Subject of many Authors, I ſhall not amplifie thereupon in this Place.

That the Sun, Moon, and Stars ſeem to have been made for other Ends than meerly to enlighten us, though we ſee no other Ends, is a Maxim which adds more to the Glory of its Creator, than to ſuppoſe, as Man arrogantly doth, that they were made only to ſerve us: Or, as he expreſſeth it, " Only to ripen " our Medlars, or enlarge the " Sphere of our Cabbages. That the Planets are Worlds above the Sun, and that the fixt Stars are Suns to other Worlds unknown to us, is no Heterodox Notion, no way diſconſonant to the

the Scripture or Principles of Chriſtian Religion. For though *Moſes* writ nothing but Truth, yet he wrote not every thing which God made, but only ſet down his Creation of us, and thoſe things which are ſubſervient to us; but that they are ſubſervient to nothing elſe, is too great a Pride in Man to aſſert. As if the Earth, which is acknowledged the leaſt, groſſeſt, and moſt heavy of all the Globes of the Heaven, except the Moon, and is by ſome ſuppoſed the very rubbiſh of the Creation; and for that cauſe by the *Ptolomaicks* placed in the Center, as remoteſt from the Purity of the Heavens, as well in place as in kind, ſhould neceſſarily be attended by ſo many Glorious Luminous Bodies, far purer and greater than it ſelf; and that they ſhould ſerve only as Torches to enlight-

enlighten this Dunghil of ours. Add, that this Suppoſition Limits the Power of the Almighty, to affirm he hath made but one habitable Globe. Whereas his Power is extended in creating of many; his Wiſdom extolled in the Variety of Creatures; his Providence amplified in the ſeveral ways of Governing them, by a diverſity of Laws ſuitable to their Nature: And 'tis highly probable that in ſuch a Diverſity he diſplays to them ſome of thoſe Attributes of which we are wholly Ignorant. I confeſs it favours more to Religion to admit a plurality of Worlds, than of Pride to deny it. And as I hold it more than probable, and without violence to the Text demonſtrable from Scripture, that there is more than one habitable World, ſo having promiſed a direct Treatiſe thereof, I ſhall

wave the conſideration thereof in this Place.

His Notion, " That thoſe other " Worlds we do not ſee, or but " Imperfectly believe, are the " Froth or Foam, of the Sun's " purgations, is grounded on an Opinion of the Ancients, that the Sun and other Stars ſtood in need of Nutriment, which they ſuppos'd, (inſtead of other matter) that they received from this Globe of Earth and Sea. And our Author ſuppoſeth " theſe " great Fires could not ſubſiſt, " if they were not faſtned to " to ſome matter capable of " their Nouriſhment ; which matter, beſides our Terraqueous Globe muſt be the Moon, Planets, and other Objects diſcoverable in the Heavens by Teleſcopes, of which the Eye alone can take no perfect Cogniſance.

For

For not only is the Earth we Inhabit enclos'd with Vapours of Rain, Hail, Snow, Clouds, &c. which being ſent forth and diſtilled by its Central Fire, or exhaled by the Influence of the Heavens, and which we call the Atmoſphere of Air, that encloſeth us, but the Moon, the other Planets, nay the Sun it ſelf, doth emit thoſe Vapours, as the Spot in the Sun diſcoverable every 28 Days and other vapours encompaſſing it, which the Teleſcopes have diſcovered, do ſufficiently demonſtrate. Add to this, that Comets and new Stars are of this kind, which being matter exhaled from ſeveral of the Heavenly Bodies, and kindled in their Motion, do continue their Light, till the matter being conſumed, the fiery Part returns to the Sun, or ſome other fixed Stars, while the groſſer

Elementary Parts, either contract a new Globe of its own, or diſpels it ſelf abroad, ſtriking and uniting to the next Planet, to the Moon, or to our Earthly Globe. For there is nothing burneth without ſome Matter capable to give it Aliment, which when conſumed, every Part returns to its own Element from whence it came ; as Wood diſperſeth into Smoak, Soot, and Aſhes, as well as Flame, Fire, and Water. Now as the Wood ſcattereth its Soot, in the Chimney, leaveth its Sap upon the Ground, its Aſhes in the Hearth, and its Flame flyeth into the Air, ſo theſe matters burning out, by alterations, and renovations of their Light, do ſcatter their ſeveral Particles abroad, which being diverſly diverſified, do produce ſome new Globes or Worlds, perfectly formed, others Imperfectly ; and ſome ſtick-

ſticking to the Worlds already framed, do become Gibboſities, Bunches, Additions to them, or part of them, and from ſuch Original our Author ſuppoſeth *America* to have proceeded; " which " being the Purgations or Ruſts " which the Sun hath rejected, " and theſe condenſed into Bodies " capable of Attraction from " our Earth, have united themſelves to our Terreſtial Globe " and become a part of it. The like may be ſaid of many Peninſula's, Iſles and Mountains which have ſwelled and riſen in our Globe; which the Ancients, though they have often been in the ſame places, have had no knowledge of; for as the Sands in the Deſart of *Arabia*, carried by the violence of the Wind, do raiſe new Hills, which to the laſt Paſſenger were unknown, ſo in ſucceeding Ages thoſe vaſt

quantities of matter, which have interchangeably been altered, ſeperated, diſperſed, and choſen them new Seats, have made ſtrange alterations in this Globe of ours as well as in many others to us unknown.

'Tis hard to conceive that the Induſtry, Ability and Longævity of Men in former Ages, carried them no farther than their own Doors, and that only this dwarfiſh Age of the World ſhould diſcover thoſe unknown places, which Men of greater Abilities could never find, or ſee when they have been often upon the place. Our Fore-Fathers have rounded the Ocean a thouſand times, yet could never find that vaſt tract of *America*, which we have now diſcovered: Surely their Eyes were as good as ours; but then *America* was

was no Object for them, becauſe it was not, or not above Water; and to ſay Arts are ſince improved is an inſufferable Arrogancy; For what do we Know that they were Ignorant of? Nay, What was it they did not Know, of which we now profeſs our Ignorance? Twas *Ariſtotle*'s Pride brought Ignorance among us. He burnt the Books of the Ancients, that he might Eſtabliſh is Nonſence. And a lazy Ignorance hath made us ſtill receive, without examination, his Magiſterial Dictates. Yet in this Enquiring Age of the World, moſt of our Eminent Philoſophers, reject his Writings as Waſte-paper, and embrace thoſe Ancient Notions of *Pythagoras*, *Plato*, *Thales*, *Orpheus*, and others his Predeceſſors, which he ſo ſtudiouſly ſuppreſt; ſo that what we are now learn-

ing. they had in perfection, and by thoſe Arts improved their diſcoveries to a farther extent than we yet have done. We boaſt of Guns and Gun-powder but what elſe were the *Fulmina Jovis* of the Poets? We boaſt of Printing, but what elſe were *Cadmus* his Letters? Yet both theſe Sciences have been in uſe among the (by us ſo eſteemed) Ignorant *Chineſes* ſome thouſand of Years paſt. *Alexander*'s Sword, and *Ariſtotle*'s Principles involved the World in as great ignorance, as at this day the *Grand Turk*'s Cymeter, and *Mahomet*'s Alchoran, have brought on the places under its Dominion. And that ancient Learning ſeems to be only retained in an obſcure Part of *Tartary*, whither the wiſeſt of the *Greeks* fled with their moſt excellent Authors, in the general Deſtruction of Kingdoms and Scien-

Sciences under *Alexander* and his Maſter *Ariſtotle*. Of which *Grecian* Colony the Ingenious Monſieur *L' Epy* hath given us the knowledge in his Voyage into thoſe parts; whither if ſome Induſtrious Man would Travel, and by Converſation with thoſe happy *Grecians* procure an impreſſion of their Authors, probably its Learning might again be reſtored to that Purity it was in before *Ariſtotles* cloudy Principles had ſuppreſſed it. The reaſon our later Navigators give of thoſe places being unknown to the Ancients, was becauſe they had not skill in Shipping and Navigation; but ſhall we think that *Noah*'s three Sons, who had been with their Father in the Ark could build no other than Fiſher-boats, as moſt Eaſtern Nations now uſe but ſmall Veſſels? Wars, Diviſions, De

Deſolations, and other Accidents have now cauſed the Ancients to loſe thoſe Sciences that they had formerly in ſuch perfection. Conſider what *Egypt* is now, which formerly was eminent for all Sciences; where is *Greece*, the Mother of Learning, *Athens* the Seat of the Muſes? The ſame Caſualties will in time reduce us to that Ignorance they now labour under.

But we muſt return to our Author, whom we find landed in the Moon; and there we ſhall find him, Poet like, deſcribing the ſtrange Sights he ſaw, with the Amænity of the place, fit to ſet forth a Terreſtrial Paradice, in the ſeveral Sences the organical Body is capable to receive them. His Smell was regaled with the Spirits or In-

Inviſible Souls the Simples did exhale, the like our Flowers and Vegetables do here: The Stones forſake their hard and craggy Nature, and carefully ſoften to the touch of his Feet, which our ſofter Stones will ſenſibly do: The lofty Trees, whoſe elevated Fronts ſeem to kiſs the Skies, imitate our Cedar: The Flowers growing without help of any other Gardiner but Nature; the perpetual Spring; the Abſence of venomous Plants, and noxious Animals; the delightful Murmurs of the Brooks; the melodious Tunes of the winged Choriſters of the Foreſt; the pleaſant Repetitions of the Eccho in the ſtill Air; the conſtant Verdure of the Meadows; the confuſed Paintings of the Diverſity of Flowers; the ſoft Agitations of the wanton *Zephyrs*; the delicious Ri-

vers

vers and Streams, whoſe Banks are embroidered with variety of Flowers, like a Garland; and thoſe large Foreſts of Myrtles and Jeſſamines which he there deſcribes, are all Imitations drawn from the Poets of their *Ver perpetuum*, and *Aurea Ætas*, which they placed in ſome part of the Earth, or the Elyſian Fields, Divines in the Terreſtrial Paradice, and our Author in the Moon, as the fitteſt place to partake of ſuch Pleaſures; where ſome Divines, not injudicious, have thought the real Paradice of *Adam* to have been ſituated. His old Hair falling off, in the room of which came other, thicker, and ſofter; the change of his Face to a Vermilion Hue, the augmentation of his natural Heat, the reſtoration of his Youth, and his returning to fourteen Years of

Age,

Age, ſeems to be taken from *Mahomet*'s Paradice, and may be proper effects of ſuch a Salubrious Country as the Moon by him is deſcribed to be; the natural poſſibility of which muſt be conſidered when we have more ſure Grounds of the Truth of thoſe things which he deſcribes.

His Diſcourſe he had with a God-like Perſon he met in the Moon, is knotty, obſcure, and by reaſon of the Blanks which often intervene, ſcarce intelligible. He ſeems to infer, " That " our World was firſt peopled " by Inhabitants from the Moon; " and attributeth the manner " of their conveyance thence " to the ſtrength of Imagination, " (which the Body being exempt " from the Corruptions of Na- " ture, from the Debauches of

" Vice,

" Vice, the Crudity of Suſte-
" nance, and the Alterations of
" Sickneſs) did excite a violent
" deſire in the Mind to approach
" this Earth, and by the Fire
" of this Enthuſiaſm or Exta-
" ſie, was carried into the Air.
" But the Woman, the Infir-
" mity of whoſe Sex rendred
" weaker, and leſs vigorous,
" was uncapable of over-maſter-
" ing the ponderouſneſs of Mat-
" ter by the Contention of her
" Will, had been left behind,
" had not the Sympathy be-
" twixt both united them; that
" the Man aſcending, like the
" Magnet, drew the Woman af-
" ter him, till they both arrived
" to this Earth, and inhabited the
" Country betwixt *Meſopotamia*
" and *Arabia*, known to ſome Peo-
" ple under the Names of———
" and to others under that of
" *Prometheus*. Whence our Au-
thor

thor drew this Notion, I cannot appprehend: Perhaps he would infer:

1. That our World was peopled from the Moon; and in that Senſe would explain the Fable of *Prometheus*, whom the Poets feign in their Mythologies to have ſtolen Celeſtial Fires.

2. He would confirm the Doctrine of Extaſies and Raptures; as ſome have thought, that the force of Imagination, or that the Mind intenſively bent on Supreme Cogitations, will tranſport the Body into the Air by ſuch Raviſhments. Whence perhaps he may, 3. Suppoſe, that by this means we may aſcend to the Moon: Or, 4. By this Doctrine he would explicate St. *Paul's* Raptures to the Third Heaven; or, 5. Demonſtrate the poſſibility of

of Witches being carried in the Air.

6. He ſeems to anſwer the Queſtion, why there is that Sympathy and deſire of Union betwixt Man and Woman, by comparing Man to the Load-ſtone, and Woman to Iron; and this not only in an Union of Hearts and Bodies, but ſo vigorous, as to alter the Property of Gravity in natural Bodies, and to cauſe the Woman to aſcend.

7. He ſeems in the whole to allude to *Adam* and *Eve* framed in Paradice, which was near *Meſopotamia*, and to expound the Fable of *Prometheus*, which is probably enough meant of them. And yet, 8. He would infer, That the World was peopled before *Adam*: Which Notion, how obſcure ſoever, ſeems not al-

altogether groundleſs; (of which elſewhere.) What our Author relates of the return of this great Man again to the Moon, by reaſon of the Wickedneſs of the World, is as obſcure as the former, and ſeems to allude to the Fable of *Aſtrea*, or Juſtice forſaking the Earth becauſe of its Iniquity. Of which *Ovid:*

Ultima Cœleſtum terras Aſtrea reliquit. Lib. 1. Metam.

And would perſwade us, that Juſtice only reſides there. But the way of his Aſcent is remarkable, and ſeems to be another Invention to ſhow us how to fly thither; " which was two " great Veſſels, filled, glewed " cloſely, and faſtened under his " Arm-pits; the Smoak of whoſe " property was to aſcend, and " which could not penetrate the

" Me-

" Metal, raiſed the Veſſel, and " with them this great Man in- " to the Air. But till he informeth us what Smoak he put into them, or what Metal they were made of, we muſt defer our Cenſure of the natural Poſſibility of an Aſcent by any ſuch means.

The Deſcription he gives of the People of the Moon, is ſomewhat contrary to the Faſhion of Men amoug us, but not contrary to Nature or Reaſon. *Gonſales* made them of a large Stature; but in Figure like to us. And this erect Figure in which Man walketh, ſome have been ſo fond of, as to ſuppoſe it a part of his Maker's Image, whilſt others make it the diſtinguiſhing Mark between the Humane and Brutal Nature: Of which the Poet.

Pronaq;

Pronaq; cum ſpectant animalia
cætera terram——
Os hominis ſublime dedit——
Ovid, Lib. 1. Metam.

But our Author upon no ungrounded reaſons tells us, " That here their Men are, for " the moſt part, Twelve Cu- " bits long, and that they did " walk upon all four, and " were themſelves of O- " pinion, that Nature having " beſtowed upon Man, as well " as Beaſt, two Arms and two " Legs, they ought as well to " make uſe of them, as being " the apteſt Seat for the re- " poſe of our Bodies, the ſa- " feſt for ſecurity from falling, " to which an upright Figure " is ſubject; and therefore the " fitteſt to which ſo noble a

" Crea-

" Creature as Man is to be en-
" truſted. Now Nature is not tied up to outward Faſhions or external Figures: 'Tis not the Body, but the Mind that makes the Man; nor hath the Almighty limited the diſpoſal of his Image, or the imparting of the Rational Soul to an erect Figure only; for Apes and Monkeys may lay a claim to Rationality; and Birds may be eſteemed the moſt reaſonable of Creatures, were an erect Figure the Characteriſtical Note of Rationality. Reaſon may dwell in the Prone as well as in the Upright, though God hath given it to that Figure here on Earth; but that it is not there to be limited, and o-thers exempt from it is mani-feſt: For I have known, thro' Weakneſs and other Infirmities, Men that have been forced to crawl

crawl on their Hands and Knees yet have had more refined Intellects than others. Besides, 'tis a question, whether we are beholden to Nature for our Upright Figure, more than to Art and the busie Care of our Nurses; who by Swathling-Clothes, stretching of the Limbs, Bindings, Bolsterings, Rockings, and other means prevent our falling on all four, which else we naturally shall do: And hence Man of all other Animals, is longest learning to go, which *Quadrupedes* do immediately; because often Practice must alter by Art, the Site and Proportion of the Body which Brutes Naturally have. And though 'tis too inhuman to try so doubtful an Experiment on an Infant; yet were the tryal made of a Dog, or some other Beast when newly born, 'tis probable they might

might be reduced to a more Upright Figure than they now enjoy, if not to walk erect as Man doth, and as we see some Dogs practice to walk on their Hinder-feet by imitation, what would they not do if Art was used on that Docile Creature? However, I will not alter that Figure my Maker hath endued me with, but leave it under consideration; which if it be not possible in Humane Beings on this Earth, yet doth not limit his Power in other places, where he hath framed Creatures and Inhabitants besides us; which as different from us in Place, so may be various from us in Figure, Station or any other property the unconfinedness of his Power may please to bestow on them.

To

To demonſtrate that there are other Creatures, endued with Underſtanding beſides Man, " he " tells us of a Perſonage he " found in the Moon, (though " Inhabitant of the Sun) with " whom he had much learned " Diſcourſe and Familiarity; the " Viſits of which officious Spi- " rit (as he ſtiles him) were " ſingular Solacements to the " Hardſhips of his uſage. Under the notion of this Viſible Spirit, I conceive he would infer two things.

1 ſt. " That other places be- " ſides our Earth are Habitable " by various kinds of Beings to us " unknown, ſuch as was this " his Spirit who conferred with " him. And theſe Religion and Scripture hath called Angels and Devils, both which have di-

ſtinct

ſtinct Habitations, Reaſon and Nature have ſtiled Dæmons or Spirits, and Superſtition hath diverſified into the ſeveral Names, of Oracles, Nymphs, Genii, Fauns, Satyrs, Lemures, Larvæ, Fairies, Shades, Manes, Hobgoblings, Mumms, Viſions, Chymera's, *&c.* Under which names Ignorance conceiveth of many frightful Imaginations, which the wiſer interpret to be the variety of thoſe Creatures to us not perfectly known, or at ſome times more converſant with us than at others, rather than one entire Being or Spiritual Exiſtence. For as Angels and Devils are diſtinct Spirits, and as the Devil had the Name of Legion ſo we are to conceive, that under theſe ſeveral Terms other kinds are hinted to us; and that the Devil hath the Name of Legion as well from the variety

variety of Kinds as the greatneſs of their Number. For as among Beaſts, Birds Fiſhes, and Inſects, we find a diverſity of Kinds, among Men ſeveral Languages, Cuſtoms and Inclinations, who alſo are as variouſly different in their Intellectuals; ſo among thoſe inviſible Agents of the other World are found various Kinds, Orders, Degrees, Functions, and Operations, which by thoſe Obſcure Terms have ſometimes been ſignified to us; yet theſe, how different ſoever, are all the Handy-work of that one great God who hath made all things; and whether they inhabit in the higheſt Heaven, in the loweſt Hell, in the Sun, Moon, Stars, Cavern of the Earth, or any other places, ſtill they follow the Laws of that Provi-

Providence he hath in their reſpective Kinds ordained them.

2*d*. He ſuppoſeth, "That "theſe Officious Agents, or in- "viſible Spirits, have Com- "munication with one another "in their reſpective Kinds and "Places of aboad, as alſo with "Man upon this our Earth, "and Man with them. And this I conceive to be a firm Truth: For the Scripture tells us, *That Angels are miniſtring Spirits ſent forth to miniſter; And that the Devil goeth to and fro in the Earth, and walketh up and down in it.* The Notion that every Man had two Spirits attending him a good one and an evil, may be admitted with ſome Qualification. That Angels did preſide over Kingdoms and Provinces is manifeſt from the Prophecy of *Daniel*; and the Max-

Maxim of a good Genius is a Truth of much Conſequence, owned by the Wiſeſt, and denied by none but the Superſtitiouſly Ignorant, or Atheiſtical Sadduces. Now that this Conference or Communion muſt be limited only to good or evil Angels, is no Conſequence from Scripture; becauſe they mention no more; for if there are more than thoſe kinds, as is more then probable, they have all a Communication one with another, they with Man, and Man with them; whoſe rational Soul being a pure Intellect, is to be accounted among the Number of thoſe Inviſibles the Almighty hath created. " This " officious Spirit of our Author " relates, That he was formerly the Spirit of *Socrates*, from " whom he went to *Epaminondas*, thence to *Cato* and *Bru-*

" *tus.* But the World grow-
" ing Wicked, he retired, till
" being ſent again, he conver-
" ſed with many learned Men,
" ſuch as *Cardan*, *Agrippa*, *Fau-*
" *ſtus*, *Ceſar*, *Campanella*, *La*
" *Mothe*, *Gaſſendus*, *Triſtram* the
" Hermite, and others, and now
" met with our Author in the
" Moon, where he tarried, be-
" cauſe the Men were Lovers
" of Truth. By which it ſeems
our Author means that Learn-
ed Genius which was found in
all thoſe Great, Wiſe, and Learn-
ed Men; who whether they had
Intellects of their own framed
for ſo great Learning they at-
tained to, or whether inſtructed
by ſome Inviſible Agent, were
ſufficient Arguments, that Wiſ-
dom is not attainable by all,
but that many are prompted
thereunto by ſome unſeen Aſ-
ſiſtance that directeth them. I

ſhall conclude this Head with this Note, that the diſcovery of many uſeful Sciences and Arts, ſuch as the direction of the Magnet to the North-Star, that uſeful Diſcovery of the Telleſcope, together with many excellent Sciences and uſeful Arts, have not been the effect of Induſtry, Reaſon or Fore-caſt, but meerly caſual, and from uncommon Obſervation, yet the Perſons who diſcovered them were prompted thereto by ſome Inviſible Agent, who out of kindneſs to us, did, as it were, or as we apprehend it, by chance, diſcover the knowledge of thoſe things we knew not; which diſcoveries being once made, Arts, Learning, and Philoſophy, have poliſhed, refined, and perfected.

The Inſtruction he gave to *Campanella*, when in the Inqui-

 ſition

ſition, " To frame his Face and
" Body to the ordinary Poſtures
" of thoſe whoſe Interiours he
" had need of knowing, that
" he might raiſe in himſelf the
" ſame Figure, the thoughts that
" the ſame Situation had ſtirred
" up in them, is an Art very
uſeful to thoſe who have ſly and malicious Adverſaries to deal withal, and is in it ſelf poſſible from natural Principles and Experiments: For in every like there is an Aſſimulation, and the Mind and Paſſions thereof uſually follow the outward Frame and Geſture of the Body. Man's Body is in all alike; the Anatomical Frame little different in any; which makes all Men have a general Agreement in Matters purely natural, every one aiming at Humanity and Vertue, (except where outward Contingencies have depraved them:)

Which

Which univerſal Agreement is not in Beaſts, whoſe various Structure ſtirs up in them as great a variety in Qualities. The Paſſions in Man are ſtirred up by Objects external, and theſe put the Body in various Poſtures; the Frowning Countenance, the Shrugging up the Shoulders, the Nodding the Head, the Winking and Leering with the Eye, are outward Tokens of a diſturbed Mind. The paſſionate Man bites his Lip; being vexed, ſcratcheth his Head; being in a Rage, ſtampeth with his Feet; Lamenting, he beats his Breaſt, and wringeth his Hands: While the ſtudious Man, whoſe Thoughts are intent, hath his Eye fixed, and his Body unmoved; which Poſture gives him liberty to muſe ſedately, and takes him off from thoſe Objects which otherwiſe would divert him.

Now ſince ſo many various Poſtures ſhew the inward Thought of the Mind, it muſt with as much Reaſon follow, that my Body, framed in Face, Poſture and Geſture to that of another Man, will produce in one a general and not imperfect Idea of his Cogitations; and the more equal in Temperament two Bodies are, and the freer the Mind of the Obſervant is from all violent Paſſions, the better will he comprehend what another thinketh. And, no doubt, but many uſe this Method, Juglers, and thoſe who uſe Legerdemain eſpecially. Hence it is, though we ſee not the Cauſe, yet we are generally diſtaſted at thoſe who we perceive to imitate our Geſtures, thinking they mock us; which though they do not deſignedly, yet that Poſture raiſing in us equal Thoughts, we, who as

all

all Men elſe, would have our Thoughts concealed, blame them for their ignorantly, by ſuch Sleights, ſtealing them from us.

" This Officious Spirit diſco-
" vers himſelf to be an Inha-
" bitant of the Sun. That the Sun, as well as other Stars, is habitable, is no Novel Opinion, nor hath it in it any abſurdity. I know Ignorance laughs at it: And indeed to ſuppoſe Men and Beaſts, compoſed of ſo groſs Matter as we are, can make our abode there, would be a ridiculous Thought: But that God who hath formed the Sun ſo different from all other the Works of his Creation, can alſo create Beings of a Temper fit to inhabit it. We may as well infer, that nothing can live in the Sea, becauſe Man is drowned in it, as to ſay the Sun

cannot be inhabited, becauſe Man is burnt up in it: And we may as equally deny a poſſibility of Angels inhabiting the higheſt Heaven, becauſe it is too Glorious for Man to behold. But he goes on, and tells us, "That the Inhabitants "of that Globe are of a very "hot Temper, Stirring, Ambitious; That they live three or "four thouſand Years; That "they are by nature Bodies, "but not like us, nor to any "thing we believe to be Bodies. And here our Author gives an excellent Account of the uncertainty of our Conceptions in things unlike us, and inferrs, "That it is not in our Power to "conceive of things exempt from "Matter.

For, 1. We have only Five Senſes, of Seeeing, Hearing, Taſting,

Taſting, Smelling, and Feeling.

2. We only call that Body which we can touch, or which is comprehended under any of theſe Five Senſes.

3. Nothing but Matter is the Object of theſe Senſes; and in Nature there is nothing but what is material. Now there is too little Alliance betwixt our Senſes and the Explication of Myſteries above us. We imagine what we cannot comprehend, to be Spiritual, or not all. This Miſtake made Mr. *Hobbs* ſay, *God was a Corporeal Subſtance, or Nothing.* This makes the Vulgar ſuppoſe all things are empty when they are filled with Air, becauſe Air is a refined Matter not ſubject to our ſight. Whereas there is in the Univerſe a Million of things, which would

would require in us a Million of different Organs to be underſtood, whereas Nature hath given us but Five only. 'Tis Reaſon, and not Senſe, muſt judge of things above us: For ſhould we meaſure all things by Senſe, wherein ſhould we differ from Brutes? A blind Man may as well judge of Colours, as the Senſes judge of Spiritual Objects. 'Tis the Rational Soul that doth converſe with Intellects; and Reaſon ſoars above Senſe; which while ſome neglect, and will credit nothing but what they ſee, or their Senſes can conceive, they degenerate into worſe than Brutes, and become more unreaſonable than thoſe who have no Reaſon at all. Hence it is as he tells us from the diſproportion of the Nature of Spirits to our Senſes, That when theſe Spiritual Beings

ings would repreſent themſelves to us, they were obliged to take Bodies proportionate to what our Senſes were capable to conceive; which being to them a Preſſure, they contracting themſelves into a condenſe Cloud, did often ſuddenly diſappear; the Light by its Heat diſſipating the Miſt they had combined; which made many doubt the Truth of their Reality, and eſteemed them as Fancies; they, for the moſt part, accommodating themſelves but to one Senſe at once; ſometimes to the Hearing, as in Voices, Knockings, Oracles; ſometimes to the Sight, as in Fires, and Viſions; and ſometimes to the Feeling, as Incubuſſes; and other times to no Senſe, but unſeen ſtirring up the Spirits in the Body, and prompting the Mind to the executing thoſe things they would have us to perform.

The

The two-fold Idiom of Speech he ſays the Lunar Inhaitants uſe, is very pretty, and deſigned to inſtruct us how much Muſick and Dum Signs may be improved among Men.

" The firſt Idiom uſed by
" the great Ones, is apprehen-
" ded by the Ear, conſiſting of
" different inarticulate Tones,
" much like unto our Muſick,
" when Words are not added
" to the Air; an Invention
" both uſeful and pleaſant, at
" once inſtructing the Mind,
" and refreſhing the Senſes,
" performed by a Lute or other
" Inſtrument; with which, as
" well as with their Voices, they
" communicate their Words to
" each other, ſo that fifteen or
" twenty together will diſcourſe

" a

" a point of Divinity, or the
" difficulties of Proceſs by the
" harmonious Conſort of Mu-
" ſick.

Now among us, Inſtrumental Muſick will in part do the ſame, the ſeveral Tunes therein ſeeming articulate to thoſe who know the Song to which it is ſet. By this manner it pleaſed God himſelf to be worſhipped of old; and the Royal Muſician not only framed Songs of Praiſe to his Inſtrument, but calleth upon us to Sing Hallelujahs to our Maker on all kinds of Muſical Inſtrumets, *Pſal.* 150. The remains of which is ſtill kept in our Churches, by Organs and the vocal Singing of Pſalms; which though to a Stranger confuſed, is to thoſe uſed therein, Melodious and a help to Devotion. How far Speech may be improved

ved by ſuch means, and the Art furthered, I leave to thoſe better skilled and delighted in Muſick than my ſelf.

" His other way uſed by the
" vulgar, is apprehenned by the
" Sight, and conſiſts only of the
" Motion of the Members; where
" the Agitation of the Fingers,
" Hand, Eye, Arm, *&c.* ſignifie a
" period or a particular Oration.
" Other Motions, as a Wrinkle
" on the Fore-head, Quivering
" of the Muſcles, Reverſion of
" the Hand, Stamping of the
" Feet, *&c.* ſerve to deſign the
" Words intended in the Period
" or Oration they are Speaking;
" ſo that this conſtant, Motion
" of the Body, in all its parts,
" joyned with their going Na-
" ked, they ſeem rather to Trem-
" ble than Speak.

This

This kind of Diſcourſe is in part uſed by us in the Winking of the Eye, Nodding of the Head, Shrugging up the Shoulders, Stamping with the Feet, *&c.* which diſcover to the Beholder ſeveral intentions of the Mind. This thoſe who are born Deaf and Dumb practiſe of neceſſity, and thereby ſupply the defect of Speech both to themſelves and others : With many ſuch I have my ſelf converſed, and this is uſed as an Art for Exerciſe and Diverſion by the Mutes kept in the Grand Signior's Court, who before him diſcourſe only by Signs, though they have themſelves the uſe of Speech. This may be improved much, did Cuſtom and Practiſe provide for its being followed.

The

The next thing remarkable, is an Inſtance of the Tranſmigration of Souls, or the Renovation of Youth, by the Soul and Spirit of an old Man entring into the Body of a Youth newly expired.

" This good officious Spirit
" of *Socrates* and other wiſe
" Men, who had been ſo kind
" to our Author at his firſt
" arrival, was, as to his Body,
" of an exceſſive long Stature,
" of a feeble broken Voice,
" an old Raw-bone Man, ha-
" ving in him all the Marks of
" a decaying, aged, decrepid
" Body; unknown to him he
" appears in this Poſture, and
" taking him on his Back, carries
" him, with a great deal of
" eaſe, a long way, and leaves
" him; ſoon after returns to

" him

" him metamorphoſed in Body,
" by Tranſmigration of his Soul
" in the Poſture of a young
" Man, very Beautiful, with a
" ſmiling Face, of Stature ſhort,
" and a Voice clean and vigo-
" rous, and renews his old ac-
" quaintance with him. Our Author enquiring the cauſe of his ſudden change, he tells him, That being of an old feeble crazy Body, and wearied with all Day's carrying him on his Back, he went to the Hoſpital to refreſh him, where finding a young Man newly expired by ſome violent accident, he placed his Mouth to the Mouth of the Dead Body, and by that means his Spitit entered the young Man's Body, occupied, moved, and poſſeſt it, leaving his old Carcaſe dead and life-leſs; whereby his Age was re-newed, and he become young again.

again. Indeed, this is not the real Tranſmigration of Souls held by *Pythagoras*, and to this Day believed in the Eaſtern Kingdoms. Nor is it naturally poſſible that ſuch a thing can be effected among Mankind; or that the Soul of one can poſſeſs the Body of another. Yet our Author hereby gives us a ſecret improving and aſſiſting the Life of Man, refreſhing his Age, and invigorating his Spirits by ſome ſuch means as theſe. Of this kind was the practiſe of Aged *David*, who being old and could get no heat, made uſe of young *Abiſhag* to lye in his Boſom, to cheriſh him, and procure him heat. This Fryar *Bacon* in his Treatiſe of the cure of old Age and preſervation of Youth improves, and adviſeth, as a Phyſical Remedy, to comfort thoſe whoſe Age

Age is decayed. I have read of a Nation that having ſlain a valiant or wiſe Man, will drink his warm Blood, thereby to participate of thoſe Qualities which they think tranſmuted to them in the Blood, which is the Life of the Soul. 'Tis the Opinion of ſome, that to lay ones Mouth to a dying Perſon and receive his laſt Breath, we ſhall partake of that Life and Vigour which he had in him. But this is adviſed to be practiſed on healthy Bodies of a ſound Conſtitution, and who die a violent Death, otherwiſe we partake of thoſe Maladies, Defects, and Weakneſſes that attend ſickneſs and old Age. The Gentlemen of *Greſham* Colledge had a Propoſal of borrowing of Blood from others. That a ſickly weak Perſon receiving into his Veins the warm Blood of a healthy

healthy Perſon, and a ſtrong Conſtitution; which, could they find the way of conveyance, might poſſibly produce a good Effect, and refreſh the Diſeaſed without damage to the other, who uſually every year, to prevent Diſtempers, throws away on the Ground much good Blood, which would Benefit another, could he receive it. The Story of *Æſon* reſtored from an old Man to a Youth by *Medea*, ſeems to infer, that Medicines will Effect much this way; but none ſo ſoveraign as the warm Blood of another, which carrying in it thoſe vigorous Spirits, would (could it be received) tend much to ſuch an End our Author deſigned by this Story of the Renovation of his Courteous Spirit.

The

The manner of their feeding by Fumes is remarkable: "They "ſhut up in Veſſels the Ex- "halations which proceed from "the Meat in dreſſing, which "Veſſels they open according "to the Quality and Inclination "of the Party, till they are "full; and theſe Fumes are "received either by the Noſe "in ſmelling, or by the Pores "of the Skin, which conveys "them to the whole Body, to "which end they uſually take "their repaſt naked.

Now that Fumes refreſh the Brain, and Stinks do either infect it or ſicken the Body, is manifeſt: And as Sweat is conveyed by the Pores of the Skin which is the melting or waſting of the Fat, ſo by the ſame Pores may Particles of Matter

Matter enter the Body, and in ſome kind ſerve it as a Suſtenance: An Inſtance of which he gives us in Paſtry-Cooks, who eat little, yet are very fat, proceeding from the Steams of the Meat, which inſenſibly enter them. Yet 'tis queried, Whether this alone will ſuffice to ſuſtain Nature.

Their Lodging was great and Manificent, fit to provoke Sleep, and procure all Delicacy and eaſe. " The Beds of that Coun-
" try being Orange-Flowers,
" Gilli-flowers, and Jeſſamine,
" ſtrewed three or four foot
" deep on the Ground, in and
" among which they lie down;
" the Chamber in the mean
" while enlightned with Glow-
" worms incloſed in a Chryſtal;
" Boys in the mean time at-
" tending, who tickle the Feet,
" Thighs,

" Thighs , Arms, and other
" parts; which delicate wanton-
" neſs in a moment lulls them
" aſleep in an *Epicurean* ſoft-
" neſs of Pleaſure. Indeed
we have here deſcribed a good Opiate to provoke Sleep, in thoſe whoſe Brains are diſtempered with Heat, but is no way fitting our Conſtitutions, who cannot well bear ſo exceſſive a ſoftneſs, 'Tis courſe Lodging, and Fare that beſt befitteth our rough-hewn Conſtitutions, theſe Dainties we leave to Women, and ſuch effeminate Perſons as our Lunar Inhabitants are.

His next thing is good news for the Poor and Hungry, but bad for the Poulterers and Cooks

" They mingle with their Shot
" and Powder a certain Com-
" poſition, which being diſcharg-
" ed in an Engine like our

" Fowling-peices, kill the Fowl " that it drops down unplum- " ed, ready-roaſted, well Sea- " ſoned, and fit to Eat. I grant there are ſome things of great force, Poyſons do ſome of them kill ſuddenly, and even alter the whole Frame of our Bodies in a Moment; the force of Gun-powder is no leſs violent. 'Tis probable that Mixtures may be ſo compounded, that they may even alter the very proper- ty of the Fowl; but whether it can dreſs it and ſauce it ſo ſuddenly, and make it whole- ſome Food, we ſhall ſuſpend our determination till he hath given us a Recipe of the In- gredients.

But our Author to encourage Ingenuity and Wit, and to ex- cite our Poor half-ſtarved and in-

indigent Poets to tranſport themſelves to the Moon, hath ſhewed us a very eaſie way of paying reckonings, by a ſort of current Money, not dug out of the droſſy Earth, but proceeding from the pure Mine of an Ingenious Head-piece, " by " Sonnets, Epigrams, Odes, and " Eclogues, which are there " of that valne, that for a " Stanza of ſix Verſes they may " diſcharge their Shot of a day " or two's repaſt. Yet 'tis not " all are current Payments, but " ſuch only as have the *Probatum eſt* of the Kings Poets, " to whom all are carried, and " as approved by them un- " der their Seal, are received " and paſs in Payment, accord- " ing to the value of the piece " which they rate it as it de- " ſerves. So that none are poor but Block-heads. Indeed,

in Gold and Silver is no more intrinſical value than in Paper, Sticks, or Stones, did Authority command, and Cuſtome oblige the Paſſage of the moſt contemptible things for money; every one would be equally rich according to what of thoſe things he poſſeſſed. But the ſcarcity of thoſe Metals hath put upon them a value, which enriches all who poſſeſs them. But the true Riches being that of the Mind, which carries with it a real value, our Author would hereby inform us, that none are truly to be accounted Rich but thoſe who are eminent for Learning, Ingenuity and Wiſdom and that thoſe who abound with Silver and Gold wanting Wiſdom ſtill Poor and Indigent Block-heads.

His

His next Adventure is his meeting with *Domingo Gonſales*, who arriving there with his Birds in *Spaniſh* Habit (in which Habit they cloath their Apes and Monkeys) was taken (as our Author relates) for an Ape, and called the Queen's little Animal; the Female whereof our Author was accounted: And by the King's Order were appointed to live and lie together for Procreation ſake; which gave them opportunity to converſe together in many excellent Philoſophical Diſcourſes.

" *Gonſales* in the firſt place
" gives him the Reaſon of his
" leaving this Earth and aſcend-
" ing to the Moon, which was,
" for that he could find here a
" Country, where the imagination
" was free, for without a Cor-

 nered

" nered-cap, whatever you ſay,
" though never ſo Wiſe and
" Rational, yet if againſt the
" Doctors Opinion, you are
" accounted an Ideot and Fool,
" himſelf hardly eſcaping the
" inquiſition, for maintaining a
" Vacuum, and that no Matter
" in the World was heavier than
" other.

Science, Learning, and Philoſophy, is reduced to hard Streights when it muſt be confined to the Dictates of a few Magiſterial Perſons, who having monopolized all Learning themſelves, and reduced it within the verge of their Order, would perſuade Men, that they are the only excellent of the Earth, that they are the People, and that Wiſdom muſt die with them, that nothing muſt paſs for Authentick but what hath their *Probatum eſt*, that

that all Men who are not of their Order muſt ſubmit their Reaſon to their aſſertions, and hold nothing for Truth but what they give their approbation unto. Such were among the Jews the Scribes and Pharifees who ſat in *Moſes* his Chair, and therefore pronounced the People accurſed who knew not the Law, becauſe they believed in *Jeſus*. Such in the Chriſtian Religion are the *Pope* and his Colledge of *Cardinals* who impoſe their Oracles on the Ignorant, under the name of Infallible, the proper Attribute as they ſay of St. *Peter*'s Chair, and exclude all Science, Learning, and Philoſophy that is not ſuitable to their Opinions, leaſt it ſhould diſcover their religious Frauds. Hence *Des Cartes*, fearing the Fate of *Virgilius*, whom *Pope Zachary* Condemned for an Heretick, for maintaining

the *Antipodes*, in the Concluſion of his Principles ſubmits all to the Judgment of the *Roman-Catholick Church*; which perhaps in *Spain*, would ſcarce have ſaved him from the Inquiſition. Nor is this Pride exerciſed only in Eccleſiaſtical *Hierarchies*, but is a great fault in Philoſophical Societies, who will perſwade us that they only have hit the Truth, and all other Err who differ from them. Nay ſingle Pedagogues, Tutors and Maſters will impoſe their Dictates, on their Pupils with that Authority, that they only are in the right, and nothing muſt be received for Truth but only what they dictate to them. Thus among ſome muſt *Ariſtotle*'s Principles only be received; to ſpeak againſt which were an Hereſie in Philoſophy, which Method confines the Reaſon

ſon of Men to one Subject, and hinders its expatiating it ſelf in that large Field of Knowledge, it is capable to converſe about: Many Ingenious Minds, and refined Intellects are hid in obſcurity, who have attained the Knowledge of rare Secrets, yet are unwilling to utter them becauſe the Learned Explode them. This wilful Ignorance, or Pride in Opinion (for it is the ſame thing) hinders the growth of Learning, and though many of theſe Doctors know many things to be true, which ordinary Men have diſcovered, yet will they decry them, and declaim them as falſe, becauſe they had not the Induſtry or Wit to diſcover them themſelves, counting it a ſhame, that ſuch a ſhining Light, as they perſwade Men they are in the Horiſon of Learning ſhould be out ſhined by

the ordinary Planet of vulgar Capacity, which ſeemeth to Eclipſe their Honour, and diminiſh that Reputation they had before obtained. But let them know that the greateſt Diſcoveries, and Secrets in Nature have proceeded and had their Original from Men of ordinary parts, whoſe Wit or good-hap hath made the diſcovery, which they have left to the poliſhing and refining of better Work-men. Were they good Patriots of Learning they ſhould cheriſh theſe young Infants of Knowledge, and encourage every one to bring its Stone towards the building of the Temple of *Apollo*. But the Fault in thoſe Men is encouraged by as great an Error in others, who pin their Faith on other Mens Sleeves, and *jurando in verba magiſtri*. Sooth up the one in their boaſting, and

and confining themſelves to their Dictates, only prevent their inſpection into other things. Had *Des Cartes* done ſo he had never made thoſe Eſſays in Philoſophy as he did; but he thought it better to look abroad in the World, than to depend on his Tutor ſitting idly in his Study, dictating empty Notions of *Ens non Ens*, and ſuch like. This was the Fault of the Followers of *Pythagoras*, who eſteemed the αὐτὸς ἔιπε of their Maſter an Oracle infallible. The ſame did the Peripateticks to whom *Ariſtotle's ipſe dixit* was Authentick. I could not but ſmile to ſee them quote his Text with the ſame Authority as Divines do *Moſes* or St. *Paul*. Surely thoſe Principles are faulty that ſhun examination; and they muſt be afraid of the diſcovery of Error, who will reſolve all into the Authority

rity of one Maſter. Beſides it argues a ſtupid Mind and dull Soul who will take all things upon truſt, without examining whether true or falſe it was from this lazy Ignorance that the Aſtronomy of *Ptolomy*, and the Philoſophy of *Ariſtotle* was embraced for near two thouſand Years in the World, and paſt for Authentick without examination; and had ſo continued till this Day, had not the enquiring Souls of *Copernicus* and *Des Cartes* diſcovered the inconvenience of the one, and the Abſurdity of the other, furniſhing us with Principles more conſonant to Reaſon, and common Experience; againſt which the Magiſterial Dictators did exclaim, and ſought to ſuppreſs it, as a detector of their Ignorance, till Reaſon obtained its Credit and Acceptance among con-

conſiderate, unbyaſſed, and enquiring Perſons.

Their Diſcourſe of a *Vacuum* in Nature which our Author introduceth, *Gonſales* proving, is too long to comment upon in this place. Beſides, it being a queſtion ſtill controverted amongſt the Learned, I will not cenſure my ſelf, but obſerve 'tis unconceivable how Motion, Progreſſion, *&c.* can be made without a *Vacuum*, or admitting a penetration of Bodies.

Their method of War he ſet down, is ſuch as wherein true Merit only is, crowned with Victory. " The Equality is ſuch " that there is not one Man " more in one Army than the " other; nor any inequality " taken by the advantage of " Force: They expoſe the maim-

" ed

" ed againſt the maimed, Gi-
" ants encounter Giants, Fencers
" oppoſe the Expert in Wea-
" pons, the Valiant encoun-
" ter the Couragious, thoſe who
" are debilitated fight againſt
" the Weak, the indiſpoſed en-
" gage the Sick, the Robuſtu-
" ous meet againſt the Strong,
" and the Leaders ſtrive with
" Commanders; the Battle end-
" ed they count the Wounded,
" reckon the Slain and number
" the Priſoners: If the loſs be
" equal, they decide the Victory
" by Lott; if unequal, thoſe
" who have moſt Priſoners, have
" leaſt wounded or Slain, are
" accounted Victorious. Beſides
theſe, they have Tongue-comba-
tants; the Learned diſpute with
the Wiſe, on whoſe Diſputations
depend wholly the Triumph, or
Servitude of their States. By this
means taxing the Policy of *Eu-*

rope

rupt, who fighting on all advantages of inequality, do not couragiouſly, but powerfully, or rather cowardly, overwhelm their Opponents.

Under the Notion of a Diſcourſe he had with ſome of the Doctors of the Moon, he aſſerts (in their meaning,) " That there are " infinite Worlds in an infinite " World, on this ſuppoſition, that all Beings are themſelves entire Worlds, and that they are Worlds to each other like as the Orb of the Moon is to us a Moon, and of it ſelf a World, and our Earth mutually the ſame, a World of it ſelf, and a Moon to the Inhabitants of the Orb we call by that Name. " He ſuppoſeth " the Univerſe to be one great " Animal, the Stars and all " Orbs therein to be Worlds " in that great Animal; and

" be-

" being themſelves Animated
" ſerved reciprocally to each o-
" thers, and to other Animals
" ſeparate from themſelves. That
the World was Animal *quoddam maximum*, was the Opinion of the Stoicks, that the Celeſtial Orbs were intellectual Beings was an Aſſertion of ſome of the Peripateticks. That the Celeſtial Orbs ſerve interchangeably to each other, and all Creatures, mutually are uſeful to one another daily Experience teacheth. The Sun enlightneth all the Planets, more viſibly in the Moon and this our Earth. The Stars have influence on the Earth for the production of Vegetables. Aſtrologers tell us, they Influence all Humane Actions. Man ſerveth his Beaſts, provideth them Food, Lodging, *&c.* They likewiſe produce him Service, Pleaſure and Food.

We

We, in our turns, may be Worlds to certain Creatures which are without Compariſon leſs than us; and in particular may appear a great World to thoſe little Inhabitants of Vermine, Lice, and little Worms which inhabit us. Nay our Fleſh, our Blood and Spirits may not improbably be ſuppoſed a Conjunction of little Animals who inhabit us, and by their Motion ſend us ours, being in all things guided by our Will as the Coach-man which drives them on. Theſe Animals have their Doors or Paſſages through the Pores of our Bodies, which contracted in Winter they retire and ſuſtain in the Inward Parts, cheriſhing them when they are beſieged with cold. In the Spring when they generate and multiply, the Blood begins to flow, which is nothing but a

new

new Production or Generation of theſe Animals, which being too numerous, oppreſs the Body, and wanting room, force their Paſſage by Sweat or Bleeding which eaſeth the Body: Hence ariſeth Itching in the Body when the Pores being too ſtrait, thoſe Animals dig their way through: Therefore Rubbing and Scratching eaſeth Itching, becauſe it dilateth the Pores, and gives thoſe Animals a free Paſſage. Theſe being paſſed the Pores of our Skin, if not rubbed off, produceth a kind of Scruff or Dander, which is the Seed of a new Generation of Species; ſome of which produce that Elephantine Bulk of the Skipping Flea, in ſhape like an Elephant and of a Bulk as diſproportionable to thoſe little Animals as the Elephant is to other Beaſts: Beſides theſe are produced

the

the Louſe, whom we may compare to the Rhinoceros among Beaſts. Theſe take up our Bodies for their Habitations, as we the Earth whence we were firſt formed. Their Food is our Blood, or thoſe little Animal Spirits which they were derived from, as we are fed by our fellow Creatures. Our Hairs to them are as ſo many Foreſts and Trees to us. Our Motion is to them as the Revolution of the Orbs to us. Our Pores filled with Sweat or Liquor, is to them as Fountains to us. Buboes or Pimples they eſteem as we do Lakes or Ponds What we call Mountains they eſteem as ſuch. The Bunching up of our Bones, and the Ridges of Fleſh that lie about us, they account them as deep Vallies. When they have travelled from one Ear to another, they ſuppoſe (as we) they have gone to the

two ends of the World, or encompaſſed their habitable Globe. Now though all Men have theſe Matters alike, yet are they not viſible alike in all; for ſome itch more than others, and ſome are more troubled with thoſe Animals than their Neighbours. But as the ſeveral Climates of the World, by their Temperature of Cold and Heat make its Inhabitants more or leſs dull or Active. So the Flegmatick and Cholerick, the Sanguine and Melancholick differ much in theſe things, by Reaſon the Conſtitution of the one is more hot or cold than the other. The like we are to ſuppoſe of all Beaſts in whom are found Vermine proper to their kind. Nor is it improper to ſuppoſe that thoſe little knits, or round Globules found in good Wine or Beer are other than little Animals

which

which like Fiſhes in the Sea, do inhabit thoſe liquid Elements: To ſuppoſe them Bubbles filled with Air is againſt Experience, but from the Effect they are found to be Subſtances moſt rather filled with a kind of vivifying Fire.

For, 1. That is the briskeſt, tarteſt, and pleaſanteſt Liquor, which hath moſt of them in it.

And, 2. Such Liquor heats the Body more, and refreſheth the Spirits, than thoſe Liquors where they are not, or at leaſt are not alive: Their vigorous motion tickleth the Palate in its Paſſage, which makes the Liquor (even in the Phraſe of drinking) to drink quicker or more lively: And being drunk down by the addition of ſo many Animals to thoſe before in the Blood, the

Body

Body is refreſhed, the Spirits revived, and in exceſs intoxicated, inebriated, and a Fever procured by too much abundance, which is cured by Phlebotomy, when with the Blood many of thoſe Animals depart, and leave the Body in its due Temperament again. And it is obſervable, that Liquors that are freſh where they are not ſeen, becauſe when unſeen, their Seed or Sperm lies hid in the Liquor, but being received into the Stomach, is animated. Hence dead inſipid Liquors do not inebriate or heat the Body, becauſe thoſe Animals are dead in the Liquor, and corrupted. Yet theſe Liquors make the Body ſick, becauſe it hath received a corrupt Food or Liquor which is putrified and unwholſome; and this Sickneſs continues till Nature hath evacuated the offending Draught by Stool,

Stool, Urine, and Sweat. Thus is every thing full of Animals; all things are mutually Worlds to each other, and all parts of that one Universe, which is animated by a Principle of Life, whence all things are produced. And this Life we call by the name of Motion, which God impressed upon it at the beginning.

Their Moveable, and Fundamental or fixed Houses, are an ingenious Contrivance,, and may be effected by us, one serving for change of Air, the other for defence against the variety of Seasons, or Injury of Winter, Frosts or Tempests. "The Move-
" able built of light Timber
" set on Wheels; in which are
" placed, in an Horizontal Line,
" ten pair of Bellows, which
" set in motion by a Spring,
" raise

" raiſe ſo great a Wind, that
" Sails extended over their No-
" ſes to receive their Blaſts, the
" Houſe in eight Days will tra-
" vel an hundred Miles. The
" Stable or fixed Houſes, are
" round Towers of Wood, fix-
" ed in the middle on a great
" Vice or Screw, which reach-
" eth from bottom to top; the
" Ground hollowed as deep as
" the Houſe is high. In Win-
" ter they let down the Houſe
" into this Trench, where it is
" ſecure from all Blaſts and Tem-
" peſts. In Summer the Vice
" raiſeth it above the open Air,
" to receive the benefit of the
" Air and Sun, as high or low as
" they pleaſe.

Their Books and manner of reading is a moſt curious and excellent Contrivance, worthy the Pains of the moſt Induſtri-

ous to find out, and possibly may be accomplished by the Principles of Mechanism. It is an Automoton of Nature, like our Watches, with various Indexes, suited to their several Motions. The Index denotes the Subject on which they treat, whether of Theology, Philosophy, Mathematicks, *&c.* and this divided into Chapters. So that the Index placed to such a Chapter, on such a Subject, you presently hear an Harmonious Musick, which in the Automoton reads you a compleat Lecture of the Subject proposed; at once both delighting the Ear, as well as informing the Judgment. You must observe, that before we have told you their way of discoursing by Musical Instruments; of which nature this is one, and is also portable. Our Chymes we have in Churches are of

kind like hereto. Had any the Ingenuity to frame ſuch an Automoton, Cuſtom and Uſe would make it as eaſie and familiar as the learning of any Language or Science amongſt us.

The Diſcourſe he introduceth concerning the Eternity of Matter, is not ſo odd as at firſt ſight it appears. " He looks upon it " impoſſible, that any Thing can " be made out of Nothing: " For between Nothing and an A- " tom are Preparations ſo infi- " nite, that the quickeſt Organ " cannot penetrate into them. I muſt confeſs the Problem in Philoſophy is true, *Ex nihilo nihil fit*: Nor do I ſee it demonſtrable from Divinity, that God made All Things out of Nothing. Though his Power is not limited, yet ſuch a Notion is inconſiſtent with Matter: The Scriptures

tures alledged for it fall ſhort of its Proof. The *Tohu* and *Bohu*, the Informed, Void and dark Chaos, ſpoken of *Gen.* 1. 2. ſeems to have been pre-exiſtent to the ſix Days Work. Yet when it had its Original is hard to conceive; and to admit of Matter Eternal with God, is Heterodox in Reaſon and Religion. I will not determine herein, nor give my Thoughts. The Diſcourſe he had hereof was grounded on the Atoms of *Democritus* and *Epicurus*, whoſe Principles the Lunar Philoſopher traced over to our Author: which informs us, that our Author was a Follower of *Epicurus* in this Point.

What he tells us of an Attempt of one of the Philoſophers of the Sun, "To prove all things "are true," is not ſo ſtrange as

we imagine. That White is Black, and Black White; That One may be and not be at the ſame time; That there may be a Mountain without a Valley; That Nothing is Something, and that all Things that are, are not, are Paradoxes which ſtartle Senſe, and above our Comprehenſion. Indeed to us they are ſo, who have not Underſtandings fitted to the Conceptions of ſuch things; but that they are univerſally falſe; that all Creatures elſe have the ſame Notions of them as us, or that the Divine Being, to whom all things are poſſible, cannot cauſe them in their own Natures to be ſo, and frame the Underſtandings of ſome Creatures fit ſo to conceive of them, is a Preſumption in us limited Creatures, who meaſure all things by the ſhallow rule of our own poor Apprehenſions.

Their

Their burning their dead Bodies is ſuitable to the Cuſtom of the Eaſtern Nations, and better than Burial, which among them is impoſed as a Penalty on Malefactors. Voluntary Death, and the Friend receiving the laſt Breath, and ſucking the Blood, is grounded on the Opinion of the Tranſmigration of the Soul.

Their Sun-dials, compoſed of their long Noſes, whoſe Shadow falling on their Teeth denotes the Hour, needs ſome Explanation to underſtand it, but ſeems to be of kind to ſome Eaſtern Cuſtoms; where the Hand opened againſt the Sun, the Shadow of the Ball of the Sun falling on the Lines of the Hand, marked out the Hour.

He ſeverely laſheth the Lazineſs and Ignorance of many Philoſophers, who in obſcure Matters, refer to Miracles, Prodigies, and Events of Nature, " which, ſays he (in the Words " of a Lunar Philoſopher) ſtupid " Puppies have invented to ex- " cuſe the Weakneſs of their " Underſtanding. And I muſt my ſelf add, that the words Sympathy, Antipathy, Occult Qualities, Secrets of Nature, and ſuch like, formerly, and ſtill uſed by ſome, are only Words which Men have framed wherein to mask their Ignorance. To ſay I love not a thing, becauſe I have an Antipathy againſt it, is a Woman's Reaſon; to ſay I love it not, becauſe I do not; for to have an Antipathy againſt a thing, and not

to

to love it, are Synonomous. A Philoſopher enquires not only into the Nature of Beings, but into the Cauſes of Sympathy and Antipathy, Occult Qualities, *&c.* whence they ariſe and are produced.

But our Paper being near an end, we muſt draw to a concluſion of our Remarks, not tracing every Particular, but the moſt remarkable, and with his return again to the Earth conclude our Diſcourſe.

His officious Spirit, who had aſſiſted him ſo often in the Moon, by delivering him from dangers, and ſo faithfully inſtructed him in the Affairs of that World, and the Philoſophy thereof, undertakes now to tranſport him back to the Earth; which

which he performs without any other kind of Machine than that of himſelf. For taking him in his Arms, by the help of a kind of Whirlwind, he conveyed him in a day and a half from the Moon to the Earth, letting him fall in a Place in *Italy* near *Rome*, and left him intangled amongſt a parcel of Bryars, in a kind of Swoon; whence when he came to himſelf, he travelled to *Rome*. This Tranſportation through the Air ſo ſuddenly, he ſuppoſed to be the ſame uſed by our Witches, who march in the Air, and conduct whole Armies of Hail, Snow, Rain, *&c.* from one Country to another. Beſides, his Spirit being a Native of the Sun, could eaſily glyde with him through the Air, as do the Rays of Light. Could we have acquaintance with theſe

Spirits

Spirits, they might inſtead of Machines, tranſport us to and fro. But our Author, being arrived in this World again, we muſt end our Diſcourſe where he finiſheth his Travels.

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